INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
*We make Indiana a cleaner, healthier place to live.*

*Joseph E. Kernan*
Governor

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100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

(317) 232-8603
(800) 451-6027
www.IN.gov/idem

# PART 70 OPERATING PERMIT
# OFFICE OF AIR QUALITY

## Kobelco Metal Powder of America, Inc.
## 1625 Bateman Drive
## Seymour, Indiana 47274

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

| Operation Permit No.: T071-7315-00016 | |
|---|---|
| Issued by: Original signed by Paul Dubenetzky<br>Janet G. McCabe, Assistant Commissioner<br>Office of Air Quality | Issuance Date:January 5, 2004<br><br>Expiration Date:January 5, 2009 |
| | |

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1, A.3, and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary metal powder manufacturing operation.

| | |
|---|---|
| Responsible Official: | Shinsuke Asai |
| Source Address: | 1625 Bateman Drive, Seymour, Indiana 47274 |
| Mailing Address: | 1625 Bateman Drive, Seymour, Indiana 47274 |
| General Source Phone Number: | 812-522-3033 |
| SIC Code (NAICS Code): | 3311A |
| County Location: | Jackson |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | Part 70 Permit Program<br>Major Source, under PSD Rules; |

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This metal powder manufacturing company consists of a source with an on-site support facility:

(a) Kobelco Metal Powder of America, Inc., Plant ID No. 071-00016, the primary operation, is located at 1625 Bateman Drive, Seymour, Indiana 47274; and

(b) Praxair's hydrogen plant, the supporting operation, is located at 1625 Bateman Drive, Seymour, Indiana 47274.

IDEM has determined that Kobelco Metal Powder of America, Inc. and the hydrogen plant owned by Praxair are under the common control of Kobelco Metal Powder of America, Inc. because they satisfy the but/for test for common control. These two plants are considered one source because the two plants are on contiguous property, the two plants are under common control, and they belong to the same industrial grouping, since the Praxair plant is a support facility for the Kobelco plant. Therefore, the term "source" in the Part 70 documents refers to both Kobelco Metal Powder of America, Inc. and the hydrogen plant owned by Praxair as one source.

One combined Part 70 permit will be issued to Kobelco Metal Powder of America, Inc. and Praxair. The new plant ID for the combined source is 071-00016.

### A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) one (1) electric arc furnace (EAF), constructed in 1989, producing a maximum of 10.0 tons of carbon grade steel per hour, equipped with one (1) natural gas-fired oxy-fuel burner, rated at 9.5 million (MM) British thermal units (Btu) per hour, added in 2000, and one (1) Coherent Jet injection lance and natural gas-fired burner configuration, rated at 9.5 MMBtu per hour, not yet installed, with a doghouse evacuation system enclosure ducted to a baghouse for particulate matter control, exhausting through one (1) stack (S-6);

(b) one (1) drying rotary kiln (DRK), constructed in 2002 to replace the original DRK, drying a maximum of 15 tons of wet powdered steel per hour, with a wet scrubber for particulate matter control, exhausting through one (1) stack (S-2);

(c) one (1) natural gas fired boiler (B1), constructed in 1989, rated at 12.55 million (MM) British thermal units (Btu) per hour, providing steam to the drying rotary kiln, exhausting through one (1) stack (S-3);

(d) one (1) natural gas fired reduction/annealing furnace (RF-1), constructed in 1989, equipped with multiple natural gas-fired burners that were added in 2000, rated cumulatively at 18.0 MMBtu per hour, processing a maximum of 6.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-4);

(e) one (1) natural gas fired reduction/annealing furnace (RF-2), constructed in 1995, equipped with multiple natural gas-fired burners that were added in 2000, rated cumulatively at 18.0 MMBtu per hour, processing a maximum of 5.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-5);

(f) Metal Powder Classifying Facility including the following:

(1) One (1) conveyor and one (1) screen, for product sieving and sizing, controlled by one (1) baghouse dust collection system (BS-1);

(g) Pulverizing, Feather Mills, Classifying, Blending and Packaging Facility including the following:

(1) Pulverizing surge hoppers for RF-1 and RF-2, controlled by two (2) baghouse dust collectors (BS-2a and BS-2b);
(2) Blender packaging systems controlled by four (4) baghouse dust collectors (BS-3a, BS-3b, BS-3c, and BS-3d);

(h) one (1) Premix line, constructed in 2001, consisting of the following equipment:

(1) one (1) blender, identified as BL-1, with a maximum production capacity of 5 tons of product per batch (or 6,666 pounds of product per hour), with a process bag filter (BF-1) used to insure proper condenser operation, and a toluene condenser (HX-1), vacuum pump (Vacuum Pump-4), and chiller unit (CH-1) with pump (Pump-5) to recover toluene solvent, exhausting through one (1) stack (ID No. SS-1);
(2) one (1) 245 gallon toluene main storage tank, identified as T-1, with one (1) pump (Pump-1);
(3) one (1) 245 gallon toluene and binder storage tank, identified as T-2, with one (1) pump (Pump-2);
(4) one (1) 245 gallon condensate return tank, identified as T-3, with one (1) pump (Pump-3);
(5) one (1) 100 gallon mixing tank, identified as T-4;
(6) one (1) 80 gallon charging tank, identified as T-5;
(7) one (1) 115 gallon toluene condensate tank, identified as T-6, with one (1) pump (Pump-6); and
(8) one (1) area bag filter (BF-2a) for industrial hygiene purposes.

(i) one (1) base metal powder and additive process for the new Premix line blender, constructed in 2001, consisting of the following:

(1) one (1) bulk pack lift conveyor (CL-1);
(2) one (1) 5 ton base powder charging hopper (H-1); and

(3) one (1) base powder lift conveyor (CL-2).

(j) one (1) laboratory scale pilot blender line (LSP-1), constructed in 2001, consisting of the following equipment:

(1) one (1) 100 gallon binder preparation tank, identified as T-7;
(2) one (1) 10 gallon charging tank, identified as T-8;
(3) one (1) blender, identified as BL-2, with a maximum production capacity of 500 pounds of product per batch (or 333.3 pounds of product per hour), with a process dust collector (BF-3) to insure proper condenser operation, and a toluene condenser (HX-2), vacuum pump (Vacuum Pump-2), and chiller unit (CH-2) with pump (Pump-1) to recover toluene solvent; and
(4) one (1) 20 gallon condensate tank, identified as T-9.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including the following:
(1) one (1) 2.33 MMBtu per hour ladle preheat unit;
(2) two (2) 1.18 MMBtu per hour tundish preheat units; and
(3) one (1) 1.45 MMBtu per hour flame suppression atomizer. [326 IAC 2-2][40 CFR 52.21]

(b) Activities with particulate matter emissions equal to or less than 5 pounds per hour or 25 pounds per day:
(1) Ladle to tundish teeming. [326 IAC 6-3-2]
(2) Fugitive emissions from material handling. [326 IAC 6-4]
(3) Fugitive emissions from slag handling in the melt shop building. [326 IAC 6-4]

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection

schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-4]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may

invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

(d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management

Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

(a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control

The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

**Testing Requirements [326 IAC 2-7-6(1)]**

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

**Compliance Requirements [326 IAC 2-1.1-11]**

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.12 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.

(b) All continuous emission monitoring systems shall meet all applicable performance specifications of 40 CFR 60 or any other performance specification, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, a calibrated backup CEMS shall be brought online within ten (10) days of shutdown of the primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.

(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and CP-071-2546-00110, issued on December 10, 1993 and 326 IAC 3-5.

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( ±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( ±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold

quantity, the source must comply with the applicable requirements of 40 CFR 68.

C.17 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be 10 days or more until the unit or device will be shut down, then the permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall be considered a deviation from the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

**Stratospheric Ozone Protection**

C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

**SECTION D.1 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

(a) one (1) electric arc furnace (EAF), constructed in 1989, producing a maximum of 10.0 tons of carbon grade steel per hour, equipped with one (1) natural gas-fired oxy-fuel burner, rated at 9.5 million (MM) British thermal units (Btu) per hour, added in 2000, and one (1) Coherent Jet injection lance and natural gas-fired burner configuration, rated at 9.5 MMBtu per hour, not yet installed, with a doghouse evacuation system enclosure ducted to a baghouse for particulate matter control, exhausting through one (1) stack (S-6);

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart AAa.

D.1.2 Particulate Matter (PM) [40 CFR 60.270a, Subpart AAa] [326 IAC 12]

(a) Pursuant to 40 CFR 60.272a, Subpart AAa, and CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, the Permittee shall not cause to be discharged into the atmosphere from the EAF any gases which:

(1) exit from a control device and contain particulate matter in excess of 0.0052 gr/dscf;
(2) exit from a control device and exhibit three percent (3%) opacity or greater in any one (1) six (6) minute averaging period; and
(3) exit from a shop and, due solely to the operations of any affected EAF(s), exhibit six percent (6%) opacity or greater in any one (1) six (6) minute averaging period.

(b) The Permittee shall not cause to be discharged into the atmosphere from the dust handling system any gases that exhibit ten percent (10%) opacity or greater.

D.1.3 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21] [40 CFR 52.124]

Pursuant to 326 IAC 2-2-3(2), Best Available Control Technology (BACT) for carbon monoxide (CO) emissions, as determined in CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions, the following shall apply to the EAF:

(a) The EAF shall be operated within the enclosure controlled by a doghouse evacuation system with a minimum flow rate of 86,800 acfm, or a minimum flow rate established in the most recent stack test, ducted to a baghouse with an 85 feet tall dispersion stack. Pursuant to 326 IAC 2-2 and 6-5, the fugitive dust control and baghouse operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

(b) The particulate matter (PM/PM10) emissions from the melt shop baghouse stack (S-6) shall be limited to 0.0035 grains per dry standard cubic foot (gr/dscf) and 2.0 pounds per hour (8.8 tons per year).

(c) The PM/PM10 fugitive emissions generated during furnace operations shall be captured by the doghouse hood or contained within the melt shop building. Furthermore, ladle to tundish teeming PM and PM10 emissions (insignificant activity) shall each not exceed 0.5 pounds per hour.

(d) The visible emissions from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.

(e) Except for scrap steel, slag and raw material handling and storage shall be conducted inside the melt shop building exclusively. Furthermore, slag pot and ladle slag dumping PM and PM10 emissions (insignificant activity) shall each not exceed 0.1 pound per hour.

(f) Carbon monoxide (CO) emissions from the EAF shall be captured and exhausted from the EAF baghouse stack for proper dispersion. Total melt shop CO emissions shall be limited to 10.5 pounds of CO emitted per ton of metal product based on a twenty-four hour averaging period, 23 tons per month, and 8.5 pounds of CO emitted per ton of metal product based on a one month averaging period from the baghouse.

(g) Volatile Organic Compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content. Kobelco Metal Powder of America shall charge only clean scrap, consistent with the Scrap Management Program for Kobelco on file with IDEM. Any changes made to the Scrap Management Program shall be submitted to IDEM, OAQ thirty (30) days prior to implementing the changes.

The PM-10 emission limits include filterable and condensible PM10.

These limits shall also satisfy the requirements of the NSPS, 40 CFR 60.272a, Subpart AAa listed in condition D.1.2(a)(1) and (3).

D.1.4 Carbon Monoxide (CO)

Pursuant to 326 IAC 2-2-3(2), Best Available Control Technology (BACT), and Minor Source Modification No. 071-12222-00016, issued on August 31, 2000, emissions of CO from the EAF baghouse stack shall not exceed 6.37 pounds of CO per ton of liquid steel tapped from the EAF, based on a one month averaging period. Operation of the oxy-fuel burner and Coherent Jet injection lance and burner in conjunction with the EAF will ensure compliance with this limit.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

**Compliance Determination Requirements**

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this Part 70 permit, in order to demonstrate compliance with Conditions D.1.2 and D.1.3, the Permittee shall perform PM and PM-10 testing on the existing EAF utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.7 Continuous Emission Monitor (CEM) Specifications and Requirements [326 IAC 2-2]

Pursuant to CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, CEM data shall be made available for carbon monoxide (CO). The CO CEM data will be certified, quality assured, and used as an indicator to determine the frequency of required stack testing and appropriate exhaust system corrections. In order for CEM compliance data to be useful, CO CEMs shall be installed, calibrated, maintained, and operated to record output, documenting compliance with the CO limitations from the electric arc furnace baghouse exhaust stack (see Conditions D.1.3 and D.1.4). Kobelco shall follow the CEM Quality Assurance Plan developed by Kobelco for the CEM equipment. A Relative Accuracy Test Audit (RATA)/Certification procedure for carbon monoxide that was performed by Kobelco is on file with IDEM. Minor changes, including the averaging time over which the relative accuracy is determined, to some aspects of 40 CFR Performance Specifications are acceptable (subject to approval), due to the nature of the process and the

emission standard.

Pursuant to 40 CFR 60.273a(c), installation of a CEM system for opacity is not required because the EAF baghouse is a modular filter system. The OAQ reserves the right to require installation of CO or opacity CEMs on the basis of compliance reporting submitted.

D.1.8 Particulate Matter (PM)

(a) In order to comply with Conditions D.1.2 and D.1.3, the doghouse evacuation system enclosure and the baghouse for PM control shall be in operation and control emissions from the electric arc furnace at all times that the electric arc furnace is in operation.

(b) Pursuant to 40 CFR 60.275a(e), the Permittee shall determine compliance with the PM emission limitations in Condition D.1.2 using the methods listed in 40 CFR 60.275a(e)(1) through (4).

D.1.9 Monitoring [40 CFR 60, Subpart AAa]

(a) Pursuant to 40 CFR 60.273a(c), observations of the opacity of the visible emissions from the electric arc furnace baghouse stack exhaust (Stack S-6) shall be performed by a certified visible emission observer as follows: Visible emission observations are conducted at least once per day when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in 40 CFR 60.272a(a).

(b) Pursuant to 40 CFR 60.274a(b), except as provided under 40 CFR 60.274a(d), the Permittee is required to check and record the furnace static pressure if a direct-shell evacuation control (DEC) system is in use and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. Since a DEC system is not used with the EAF at this source, it is not necessary for the Permittee to check and record the furnace static pressure. However, the source has indicated that of the remaining monitoring requirements listed as (1) or (2) above, it will comply with option (2).

The EAF is enclosed by a doghouse type enclosure. The source will install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through the doghouse enclosure (which performs the function of a hood). The monitoring device may be installed in any appropriate location in the exhaust duct of the doghouse such that reproducible flow rate monitoring will result. The flow rate monitoring device shall have an accuracy ±10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. IDEM, OAQ may require the Permittee to demonstrate the accuracy of this monitoring device relative to Methods 1 and 2 of appendix A of 40 CFR Part 60.

(c) Pursuant to 40 CFR 60.274a(c), when the Permittee is required to demonstrate compliance with the standard under 40 CFR 60.272a(a)(3) and at any other time that IDEM, OAQ may require, that either the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b)(1) or (b)(2) of 40 CFR 40.274a. The Permittee may

petition IDEM, OAQ for reestablishment of these parameters whenever the Permittee can demonstrate to IDEM, OAQ's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. Operation at other than baseline values may be subject to the requirements of 40 CFR 60.276a(c).

(d) Pursuant to 40 CFR 60.274a(d), the Permittee shall perform monthly operational status inspections of the equipment that is important to the performances of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

(e) Pursuant to 40 CFR 60.274a(e), the Permittee may petition IDEM, OAQ to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system.

(f) Pursuant to 40 CFR 60.274a(h), during any performance test required under 40 CFR 60.8, and for any report thereof required by 40 CFR 60.275a(d), or to determine compliance with 40 CFR 60.272a(a)(3), the Permittee shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;
(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing;
(3) Control device operation log; and
(4) Continuous monitor or Reference Method 9 data.

(g) Pursuant to 40 CFR 60.276a(a), records of the measurements required in 40 CFR 60.274a must be retained for at least 2 years following the date of the measurement.

(h) Pursuant to 40 CFR 60.276a(b), the Permittee shall submit a written report of exceedances of the control device opacity to IDEM, OAQ semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(i) Either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the IDEM, OAQ to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to IDEM, OAQ semiannually.

(j) Pursuant to 40 CFR 60.276a(f), the Permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish IDEM, OAQ a written report of the results of the test. The report shall include the information listed in 40 CFR 60.276a(f)(1) through (22).

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.1.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the electric arc furnace, at least once per shift when the electric arc furnace is in operation

when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.11 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the electric arc furnace when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.1.13 Record Keeping Requirements

(a) As required in condition D.1.9(a), records shall be maintained of any 6-minute average that is in excess of the emission limit specified in 40 CFR 60.272a(a).

(b) Pursuant to 40 CFR 60.276a(a), records of the measurements required in 40 CFR 60.274a (paragraphs (b) through (f) of Condition D.1.9) must be retained for at least 2 years following the date of the measurement.

(c) Records of either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) shall be maintained as required in condition D.1.9(i).

(d) To document compliance with Condition D.1.10, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.

(e) To document compliance with Condition D.1.11, the Permittee shall maintain records of the results of the inspections required under Condition D.1.11.

(f) Records of the information that shall be submitted in the reports required in condition D.1.14(d) shall be maintained.

(g) To document compliance with Condition D.1.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

(h) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.14 Reporting Requirements

(a) Pursuant to 40 CFR 60.276a(b), the Permittee shall submit a written report of exceedances of the control device opacity to IDEM, OAQ semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(b) Either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the IDEM, OAQ to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to IDEM, OAQ semiannually.

(c) Pursuant to 40 CFR 60.276a(f), the Permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish IDEM, OAQ a written report of the results of the test including the information specified in 40 CFR 60.276a(f)(1) through (22).

(d) Pursuant to CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, reports required pursuant to 40 CFR 60.276a should also include the following information:

(1) Calendar dates covered in the reporting period.

(2) Description of excess emissions (units of applicable standard) including:
(a) Magnitude
(b) Conversion factors used
(c) Date and time of commencement and completion
(d) Corrective and preventive action taken

(3) A description of any modifications to the CEMs that could affect the ability of the CEMs to comply with Performance Specifications 2 or 3 (included with CP-071-2546-00110 on file with IDEM).

(4) For continuous monitoring systems the following:

(a) Date and time when system was inoperative except for zero and span value checks
(b) Nature of system repairs or adjustments
(c) Results of daily CEMs drift tests and quarterly accuracy assessments

(5) Lack of occurrences during a quarter including the following:
(a) Absence of excess emissions during quarter
(b) Absence of adjustments, repairs, or inoperativeness of continuous monitoring system

**SECTION D.2 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

(b) one (1) drying rotary kiln (DRK), constructed in 2002 to replace the original DRK, drying a maximum of 15 tons of wet powdered steel per hour, with a wet scrubber for particulate matter control, exhausting through one (1) stack (S-2);

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to CP-071-2546-00110, issued on December 10, 1993, the following shall apply to the drying rotary kiln (DRK) in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions:

(a) Process emissions from the DRK shall be exhausted through the 95% efficient wet scrubber exhausting from stack S-2;
(b) Fugitive emissions from the DRK shall be contained within the building;
(c) Visible emissions from any building opening as a result of the DRK shall be limited to 6% opacity in any one (1) six (6) minute averaging period.
(d) Particulate matter (PM) and PM10 emissions from the drying process shall each not exceed 0.3 pounds per hour;
(e) Pursuant to 326 IAC 2-2 and 6-5, the dryer air pollution control equipment operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

**Compliance Determination Requirements**

D.2.3 Particulate Control

In order to comply with Condition D.2.1, the wet scrubber for PM control shall be in operation and control process emissions from the drying rotary kiln (DRK) at all times that process emissions are exiting the drying rotary kiln (DRK).

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.2.4 Visible Emissions Notations

(a) Visible emission notations of the drying rotary kiln (DRK) stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.2.5 Parametric Monitoring

The Permittee shall record the total static pressure drop and flow rate of the scrubber used in conjunction with the drying rotary kiln (DRK), at least once per shift when the DRK is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the scrubber is outside the normal range of 17.0 and 23.0 inches of water or a range established during the latest stack test, or the flow rate of the scrubber is below a minimum of 30 gallons per minute, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range or a flow rate that is below the above mentioned flow rate is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instruments used for determining the pressure and flow rate shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.6 Wet Scrubber Inspections

An inspection shall be performed each calender quarter of the scrubber controlling the drying rotary kiln (DRK). Inspections required by this condition shall not be performed in consecutive months.

D.2.7 Wet Scrubber Failure Detection

In the event that scrubber failure has been observed:

The failed unit will be shut down immediately until the failed unit has been repaired or replaced.

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.2.8 Record Keeping Requirements

(a) To document compliance with Condition D.2.4, the Permittee shall maintain records of visible emission notations of the DRK stack exhaust once per shift.

(b) To document compliance with Condition D.2.5, the Permittee shall maintain once per shift records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Pressure drop across the venturi throat of the scrubber; and
(B) Liquid flow rate of supply water to the scrubber.

(c) To document compliance with Condition D.2.6, the Permittee shall maintain records of the results of the inspections required under Condition D.2.6 and the dates the vents are redirected.

(d) To document compliance with Condition D.2.2, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION D.3 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

(c) one (1) natural gas fired boiler (B1), constructed in 1989, rated at 12.55 million (MM) British thermal units (Btu) per hour, providing steam to the drying rotary kiln, exhausting through one (1) stack (S-3);

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.3.1 Prevention of Significant Deterioration [326 IAC 2-2]

Pursuant to CP-071-2546-00110, issued on December 10, 1993, in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions:

(a) the boiler (B1) shall burn only natural gas and shall be limited to 12.55 MMBtu per hour heat input. Combustion gases shall be vented to the atmosphere through stack S-3.
(b) PM and PM10 emissions from the boiler (B1) shall each not exceed 0.1 pound per hour.

D.3.2 Particulate Matter (PM) [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), PM emissions from the boiler shall be limited to 0.565 pounds per MMBtu heat input. This emission limit was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where: Pt = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input
Q = Total source maximum operating capacity rating in MMBtu/hr heat input.
= 12.55 MMBtu/hr

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.3.4 Record Keeping Requirements

(a) To document compliance with Condition D.3.1, the Permittee shall record the amount of natural gas combusted per month, including the average daily natural gas usage in each month.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION D.4 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

(d) one (1) natural gas fired reduction/annealing furnace (RF-1), constructed in 1989, equipped with multiple natural gas-fired burners that were added in 2000, rated cumulatively at 18.0 MMBtu per hour, processing a maximum of 6.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-4);

(e) one (1) natural gas fired reduction/annealing furnace (RF-2), constructed in 1995, equipped with multiple natural gas-fired burners that were added in 2000, rated cumulatively at 18.0 MMBtu per hour, processing a maximum of 5.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-5);

(f) Metal Powder Classifying Facility including the following:

(1) One (1) conveyor and one (1) screen, for product sieving and sizing, controlled by one (1) baghouse dust collection system (BS-1);

(g) Pulverizing, Feather Mills, Classifying, Blending and Packaging Facility including the following:

(1) Pulverizing surge hoppers for RF-1 and RF-2, controlled by two (2) baghouse dust collectors (BS-2a and BS-2b);
(2) Blender packaging systems controlled by four (4) baghouse dust collectors (BS-3a, BS-3b, BS-3c, and BS-3d);

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.4.1 Prevention of Significant Deterioration [326 IAC 2-2] [40 CFR 52.21]

(a) Pursuant to 326 IAC 2-2-3(2) BACT, as determined in CP-071-2546-00110, issued on December 10, 1993, and as determined pursuant to the BACT analysis submitted on February 3, 1999, and pursuant to Significant Source Modification No. 071-12450-00016, issued on August 11, 2000, and Minor Source Modification No. 071-12222-00016, issued August 31, 2000, and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions, the following shall apply to the two (2) reduction/annealing furnaces (RF-1 and RF-2):

(1) RF-1 shall burn only natural gas and shall be limited to 18.0 MMBtu per hour heat input;
(2) RF-2 shall burn only natural gas and shall be limited to 18.0 MMBtu per hour heat input;
(3) CO emissions from RF-1 shall not exceed 1.0 pounds of CO per ton of semi-finished steel powder; and
(4) CO emissions from RF-2 shall not exceed 1.0 pounds of CO per ton of semi-finished steel powder.
(5) Visible emissions from stacks S-4 and S-5 shall not exceed 6% opacity in any one (1) six (6) minute averaging period.
(6) PM and PM10 emissions from RF-1 shall each not exceed 0.13 pound per hour.
(7) PM and PM10 emissions from RF-2 shall each not exceed 0.13 pound per hour.

(b) Pursuant to CP-071-2546-00110, issued on December 10, 1993, in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions, the following shall apply to the Metal Powder Classifying facility and the Pulverizing, Feather Mills, Classifying, Blending and Packaging facility:

(1) Emissions of PM and PM10 from the conveyor and screen for product sieving and sizing shall be controlled by a baghouse dust collection system (BS-1) with a minimum overall control efficiency of 99%.
(2) Emissions of PM and PM10 from the product surge hoppers shall be controlled by two (2) baghouse dust collection systems (BS-2a and BS-2b) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-2a and BS-2b, respectively.
(3) Emissions of PM and PM10 from all blender packaging systems shall be controlled by four (4) baghouse dust collection systems (BS-3a, BS-3b, BS-3c, and BS-3d) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-3a, BS-3b, BS-3c, and BS-3d, respectively.
(4) Fugitive emissions emitted from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.
(5) Particulate matter (PM) and PM10 emissions from the Metal Powder Classifying facility shall each not exceed 0.03 pound per hour.
(6) Particulate matter (PM) and PM10 emissions from the product surge hoppers shall each not exceed 0.02 pound per hour.
(7) Particulate matter (PM) and PM10 emissions from all packaging systems shall each not exceed 0.02 pound per hour.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

**Compliance Determination Requirements**

D.4.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) During the period between 42 and 48 months after issuance of this permit, in order to demonstrate compliance with Condition D.4.1(a), the Permittee shall perform CO testing on both RF-1 and RF-2 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

(b) Within 180 days after issuance of this Part 70 permit, in order to demonstrate compliance with Condition D.4.1(b), the Permittee shall perform PM and PM-10 testing on the outlet of each of the baghouse dust collection systems identified as BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d utilizing methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

D.4.4 Particulate Matter (PM)

Pursuant to CP-071-2546-00110, issued on December 10, 1993, and in order to comply with Condition D.4.1(b), the baghouse dust collection systems for PM control shall be in operation and control emissions from the Metal Powder Classifying Facility, product surge hoppers, and all blender packaging systems at all times that these activities are in operation.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.4.5 Visible Emissions Notations

(a) Visible emission notations of the exhaust points of the seven (7) baghouse dust collection systems (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d) used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems shall be performed once per shift during normal daylight operations when exhausting directly to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.4.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the baghouse dust collectors used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems, at least once per shift when the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse dust collector is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.4.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.4.9 Record Keeping Requirements

(a) To document compliance with Condition D.4.1(a), the Permittee shall record the amount of natural gas combusted per month, including the average daily natural gas usage in each month.

(b) To document compliance with Condition D.4.5, the Permittee shall maintain records of visible emission notations of the exhaust points of the seven (7) baghouse dust collection systems (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d) once per shift.

(c) To document compliance with Condition D.4.6, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.

(d) To document compliance with Condition D.4.7, the Permittee shall maintain records of the results of the inspections required under Condition D.4.7 and the dates the vents are redirected.

(e) To document compliance with Condition D.4.2, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION D.5 FACILITY CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

(h) one (1) Premix line, constructed in 2001, consisting of the following equipment:

(1) one (1) blender, identified as BL-1, with a maximum production capacity of 5 tons of product per batch (or 6,666 pounds of product per hour), with a process bag filter (BF-1) used to insure proper condenser operation, and a toluene condenser (HX-1), vacuum pump (Vacuum Pump-4), and chiller unit (CH-1) with pump (Pump-5) to recover toluene solvent, exhausting through one (1) stack (ID No. SS-1);
(2) one (1) 245 gallon toluene main storage tank, identified as T-1, with one (1) pump (Pump-1);
(3) one (1) 245 gallon toluene and binder storage tank, identified as T-2, with one (1) pump (Pump-2);
(4) one (1) 245 gallon condensate return tank, identified as T-3, with one (1) pump (Pump-3);
(5) one (1) 100 gallon mixing tank, identified as T-4;
(6) one (1) 80 gallon charging tank, identified as T-5;
(7) one (1) 115 gallon toluene condensate tank, identified as T-6, with one (1) pump (Pump-6); and
(8) one (1) area bag filter (BF-2a) for industrial hygiene purposes.

(i) one (1) base metal powder and additive process for the new Premix line blender, constructed in 2001, consisting of the following:

(1) one (1) bulk pack lift conveyor (CL-1);
(2) one (1) 5 ton base powder charging hopper (H-1); and
(3) one (1) base powder lift conveyor (CL-2).

(j) one (1) laboratory scale pilot blender line (LSP-1), constructed in 2001, consisting of the following equipment:

(1) one (1) 100 gallon binder preparation tank, identified as T-7;
(2) one (1) 10 gallon charging tank, identified as T-8;
(3) one (1) blender, identified as BL-2, with a maximum production capacity of 500 pounds of product per batch (or 333.3 pounds of product per hour), with a process dust collector (BF-3) to insure proper condenser operation, and a toluene condenser (HX-2), vacuum pump (Vacuum Pump-2), and chiller unit (CH-2) with pump (Pump-1) to recover toluene solvent; and
(4) one (1) 20 gallon condensate tank, identified as T-9.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.5.1 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 2-7-10.5(d)(5)]

Pursuant to Minor Source Modification No. 071-14702-00016, issued on September 14, 2001, the consumption of toluene solvent in the new Premix line, including the base metal powder and additive process, and the laboratory scale pilot blender line shall not exceed 2,656 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month, such

that the limited potential to emit of VOC, any single HAP, and total HAPs shall be less than 25, 10, and 25 tons per 12 consecutive month period, respectively. The consumption of toluene solvent shall be calculated as follows:

Toluene solvent consumption (gallons) = [Toluene solvent input to the new Premix line blender (BL-1) (gal) - Toluene solvent recovered in the toluene condenser (HX-1) (gal)] + [Toluene solvent input to the pilot blender (BL-2) (gal) - Toluene solvent recovered in the pilot toluene condenser (HX-2) (gal)]

This consumption limit is required to limit the potential to emit of VOC and total HAPs each to less than 25 tons per 12 consecutive month period, and to limit the potential to emit of any single HAP to less than 10 tons per 12 consecutive month period. Compliance with this limit makes the addition of the new Premix line, including the base metal powder and additive process, and the laboratory scale pilot blender line a Part 70 minor source modification pursuant to 326 IAC 2-7-10.5(d)(5)(A) as permitted in Minor Source Modification No. 071-14702-00016, issued on September 14, 2001.

D.5.2 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the new Premix line shall not exceed 9.19 pounds per hour when operating at a process weight rate of 6,666 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the laboratory scale pilot blender shall not exceed 1.23 pounds per hour when operating at a process weight rate of 333.3 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

**Compliance Determination Requirements**

D.5.4 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-2][326 IAC 8-1-4]

Compliance with the VOC/HAP usage limitations contained in Condition D.5.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a). IDEM, OAQ, reserves the authority to

determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.5.5 Record Keeping Requirements

(a) To document compliance with Condition D.5.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the toluene consumption limit and/or the HAP and VOC emission limits established in Condition D.5.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The amount and HAP/VOC content of the solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(2) The total toluene solvent input and total toluene solvent recovered for each month; and

(3) The weight of HAPs and VOCs emitted for each compliance period.

(b) To document compliance with Condition D.5.3, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.5.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

**SECTION D.6 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

Insignificant Activities

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including the following:
  (1) one (1) 2.33 MMBtu per hour ladle preheat unit;
  (2) two (2) 1.18 MMBtu per hour tundish preheat units; and
  (3) one (1) 1.45 MMBtu per hour flame suppression atomizer. [326 IAC 2-2][40 CFR 52.21]

(b) Activities with particulate matter emissions equal to or less than 5 pounds per hour or 25 pounds per day:
  (1) Ladle to tundish teeming. [326 IAC 6-3-2]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.6.1 Prevention of Significant Deterioration [326 IAC 2-2]

Pursuant to CP-071-2546-00110, issued on December 10, 1993, in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions, the following shall apply:

(a) the ladle preheat unit, the two (2) tundish preheat units, and the flame suppression atomizer shall each burn only natural gas and shall each be limited to 2.33, 1.18, 1.18, and 1.45 MMBtu per hour heat input, respectively.
(b) Total PM and PM10 emissions from the ladle preheat unit and the two (2) tundish preheat units shall each not exceed 0.05 pound per hour.
(c) PM and PM10 emissions from the flame suppression atomizer shall each not exceed 0.01 pound per hour.

D.6.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from ladle to tundish teeming shall not exceed 19.2 pounds per hour when operating at a process weight rate of 20,000 pounds per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.6.3 Record Keeping Requirements

(a) To document compliance with Condition D.6.1, the Permittee shall record the amount of natural gas combusted in the ladle preheat unit, the two (2) tundish preheat units, and the flame suppression atomizer per day.

(b) These records shall be maintained in accordance with Section C - General Record Keeping Requirements.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY

## PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Kobelco Metal Powder of America, Inc.
Source Address: 1625 Bateman Drive, Seymour, Indiana 47274
Mailing Address: 1625 Bateman Drive, Seymour, Indiana 47274
Part 70 Permit No.: T071-7315-00016

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

**9** Annual Compliance Certification Letter

**9** Test Result (specify) _____

**9** Report (specify) _____

**9** Notification (specify) _____

**9** Affidavit (specify) _____

**9** Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY

**COMPLIANCE BRANCH**
**100 North Senate Avenue**
**P.O. Box 6015**
**Indianapolis, Indiana 46206-6015**
**Phone: 317-233-5674**
**Fax: 317-233-5967**

## PART 70 OPERATING PERMIT
## EMERGENCY OCCURRENCE REPORT

Source Name: Kobelco Metal Powder of America, Inc.
Source Address: 1625 Bateman Drive, Seymour, Indiana 47274
Mailing Address: 1625 Bateman Drive, Seymour, Indiana 47274
Part 70 Permit No.: T071-7315-00016

**This form consists of 2 pages** **Page 1 of 2**

**9** This is an emergency as defined in 326 IAC 2-7-1(12)

- C The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- C The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

| |
|---|
| Facility/Equipment/Operation: |
| Control Equipment: |
| Permit Condition or Operation Limitation in Permit: |
| Description of the Emergency: |
| Describe the cause of the Emergency: |

If any of the following are not applicable, mark N/A **Page 2 of 2**

| |
|---|
| Date/Time Emergency started: |
| Date/Time Emergency was corrected: |
| Was the facility being properly operated at the time of the emergency? Y N<br>Describe: |
| Type of Pollutants Emitted: TSP, PM-10, $SO_2$, VOC, $NO_X$, CO, Pb, other: |
| Estimated amount of pollutant(s) emitted during emergency: |
| Describe the steps taken to mitigate the problem: |
| Describe the corrective actions/response steps taken: |
| Describe the measures taken to minimize emissions: |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE DATA SECTION

## Part 70 Quarterly Report

Source Name: Kobelco Metal Powder of America, Inc.
Source Address: 1625 Bateman Drive, Seymour, Indiana 47274
Mailing Address: 1625 Bateman Drive, Seymour, Indiana 47274
Part 70 Permit No.: T071-7315-00016
Facility: Premix line blender and laboratory scale pilot blender
Parameter: Toluene emissions (VOC and HAP)
Limit: The consumption of toluene solvent in the new Premix line, including the base metal powder and additive process, and the laboratory scale pilot blender line shall not exceed 2,656 gallons per twelve (12) consecutive month period such that the limited potential to emit of VOC, any single HAP, and total HAPs shall be less than 25, 10, and 25 tons per 12 consecutive month period, respectively. The consumption of toluene solvent shall be calculated as follows:

Toluene solvent consumption (gallons) = [Toluene solvent input to the new Premix line blender (BL-1) (gal) - Toluene solvent recovered in the toluene condenser (HX-1) (gal)] + [Toluene solvent input to the pilot blender (BL-2) (gal) - Toluene solvent recovered in the pilot toluene condenser (HX-2) (gal)]

YEAR: _____

| Month | Toluene Solvent Consumption This Month (gallons) | | | Toluene Solvent Consumption Previous 11 Months (gallons) | | | 12 Month Total Toluene Solvent Consumption (gallons) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

**9** No deviation occurred in this quarter.

**9** Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE DATA SECTION

## PART 70 OPERATING PERMIT
## QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Kobelco Metal Powder of America, Inc.
Source Address: 1625 Bateman Drive, Seymour, Indiana 47274
Mailing Address: 1625 Bateman Drive, Seymour, Indiana 47274
Part 70 Permit No.: T071-7315-00016

**Months:** _____ **to** _____ **Year:** _____



This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

**9** NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

**9** THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

| | |
|---|---|
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |

| | |
|---|---|
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |

Page 2 of 2

| | |
|---|---|
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

# Indiana Department of Environmental Management
# Office of Air Quality

## Addendum to the
## Technical Support Document for a Part 70 Operating Permit

| | |
|---|---|
| Source Name: | Kobelco Metal Powder of America, Inc. |
| Source Location: | 1625 Bateman Drive, Seymour, Indiana 47274 |
| County: | Jackson |
| SIC Code: | 3311A |
| Operation Permit No.: | T071-7315-00016 |
| Permit Reviewer: | Trish Earls/EVP |

On June 3, 2003, the Office of Air Quality (OAQ) had a notice published in The Tribune, Seymour, Indiana, stating that Kobelco Metal Powder of America, Inc. had applied for a Part 70 Operating Permit to operate a stationary metal powder manufacturing operation. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On July 3, 2003, Anthony Sullivan of Barnes & Thornburg submitted comments on behalf of Kobelco Metal Powder of America, Inc. on the proposed permit. A summary of the comments and responses is as follows:

**Comment #1**

As an initial and overarching comment, Kobelco strongly objects to the requirements in this permit related to the small baghouses used in the packaging and screening areas (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d). As described in our May 20, 2002 request for permit modification, these bag-filters are utilized solely for industrial hygiene purposes, and they result in minimal emissions to the atmosphere. The original PSD permit erroneously included requirements for these bag-filters even though BACT was not required or conducted for particulate matter. Even if PSD was triggered for PM10 emissions, these bag-filters would not have been required by BACT anyway because with the small level of emissions, the cost per ton of PM10 removed would have approached $50,000. Title V is the time when such erroneous requirements should be cleansed - not the time when new requirements and vastly more stringent requirements are imposed. For these reasons, Kobelco asks that all references in this permit to those baghouses be removed. No other comment in this letter serves to waive this fundamental objection.

If references to these baghouses are included in this permit, Kobelco submits the following objections:

(a) Testing of these bag-filters should not be required because the emission levels are so low - one or two representative tests would be more appropriate;
(b) References to BS-2b, BS-3b, BS-3c, and BS-3d should be removed because those bag-filters were not included in the original PSD permit application, and therefore were installed voluntarily;
(c) The uncontrolled emission calculations are grossly exaggerated and should be modified in accordance with our May 20, 2002 letter;
(d) If any testing is required, the permit should specify that the procedure would be to test the bag-filter outlet to determine compliance with the mass emission limit since inlet loading is not feasible on many of these units;

(e) Any requirement to take visible emission notations at the exhaust point should be deleted since the exhaust points are often not visible and are in dark areas, and any emissions would vent to the indoors.

(f) All requirements for baghouse inspections, monitoring of pressure drop, and leak detection should be deleted because the emissions from these units are minimal and a reasonable justification does not exist for these requirements.

**Response #1**

Once a source becomes major for PSD for any one regulated pollutant, the remaining regulated pollutants must be emitted at levels less than the significant levels specified in 326 IAC 2-2-1(jj) in order to avoid undergoing PSD review. For PM and PM10, the significant levels are 25 and 15 tons per year, respectively. During IDEM's review of CP 071-2546-00110 (PSD permit), issued to this source on December 10, 1993, it was determined that controlled PM and PM10 emissions were below these significant levels and did not undergo PSD review. However, since potential PM and PM10 emissions were greater than these levels, limits were included in CP 071-2546-00110 for PM and PM10 emissions to ensure that the PSD significant levels were not exceeded. This is stated in response no. 4 of the TSD Addendum for that permit. Therefore, the particulate matter emission limits established for the conveying, product sieving and sizing, storage, and blending, controlled by baghouse BS-1, the product surge hoppers, controlled by baghouse dust collection systems BS-2a and BS-2b, and from all packaging systems, controlled by baghouse dust collection systems BS-3a, BS-3b, BS-3c, and BS-3d, are required to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. However, since these are limits to render 326 IAC 2-2 (PSD) not applicable, the conditions are revised to remove the statement that the limits are pursuant to 326 IAC 2-2. Instead, a statement will be added stating that these limits render 326 IAC 2-2 (PSD) not applicable.

Without specific test results for emissions from these processes, it is not possible to accept alternate emission factors or methodologies for calculating potential emissions, as presented in the May 20, 2002 letter from Kobelco to the OAQ. Therefore, a conservative approach was used by basing the potential emissions on the maximum outlet grain loadings and flow rates of the baghouses. Based on these calculations, the controls on these operations are necessary to comply with the PM and PM10 emission limits. Therefore, references to all controls on these operations, including BS-2b, BS-3b, BS-3c, and BS-3d, will remain in the permit.

The OAQ has determined that testing of each of the baghouses for these operations is necessary in order to determine compliance with the PM and PM10 emission limits to render 326 IAC 2-2 (PSD) not applicable for PM and PM10. Representative testing on one unit instead of several units can only be performed for identical emission units. Since each of the baghouses are controlling different portions of these processes, they are not identical and testing must be performed on each baghouse to determine compliance. Since these are relatively small units, the requirement to repeat the testing every five (5) years has been removed from condition D.4.3(b). Condition D.4.3(b) has also been revised to specify that the testing should be performed on the baghouse dust collection system outlet as follows:

D.4.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(b) Within 180 days after issuance of this Part 70 permit, in order to demonstrate compliance with Condition D.4.1(b), the Permittee shall perform PM and PM-10 testing on **the outlet of** each of the baghouse dust collection systems identified as BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d utilizing methods as approved by the Commissioner. ~~These~~

~~tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.~~ PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

Condition D.4.5 requires visible emission notations to be performed at the exhaust points of each of the seven baghouse dust collectors once per shift when exhausting to the atmosphere. If the baghouses do not exhaust to the atmosphere, the visible emission notations would not be required.

Compliance monitoring, including parametric monitoring, baghouse inspections, and baghouse failure detection, is required for the seven baghouses because the PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. Since the baghouses are required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance.

It has also been determined by the OAQ that additional limits for PM and PM10 emissions need to be included in the Title V permit from the units permitted under CP 071-2546-00110 (PSD permit), issued to this source on December 10, 1993, of less than 25 and 15 tons per year, respectively, so that the requirements of 326 IAC 2-2 (PSD) do not apply for PM and PM10 emissions. This includes the emission units listed in sections D.1 through D.4 and D.6 of the Part 70 permit. Additional PM and PM10 emission limits have been added to conditions D.3.1, D.4.1(a), and D.6.1. Due to differences in the emission factors used for natural gas combustion and changes to the heat input ratings of the reduction/annealing furnaces, the PM and PM10 emission limits added to conditions D.3.1, D.4.1(a), and D.6.1 are different than those included in CP 071-2546-00110. Therefore, the PM and PM10 emission limits in condition D.1.3 have also been revised so that combined limited PM and PM10 emissions from the units permitted under CP 071-2546-00110 are less than 25 and 15 tons per year, respectively. Conditions D.1.3, D.2.1, D.3.1, D.4.1, and D.6.1 have also been revised as necessary to clarify that the PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for those pollutants and are not requirements pursuant to 326 IAC 2-2-3(2), BACT. Conditions D.1.3, D.2.1, D.3.1, D.4.1, and D.6.1 are revised to read as follows:

D.1.3 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21] [40 CFR 52.124]

Pursuant to 326 IAC 2-2-3(2), Best Available Control Technology (BACT) **for carbon monoxide (CO) emissions**, as determined in CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, **and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions,** the following shall apply to the EAF:

(a) The EAF shall be operated within the enclosure controlled by an 86,800 acfm doghouse evacuation system, ducted to a baghouse with an 85 feet tall dispersion stack. Pursuant to 326 IAC 2-2 and 6-5, the fugitive dust control and baghouse operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

(b) The particulate matter (PM/PM10) **emissions** from the melt shop baghouse stack (S-6) shall be limited to ~~0.004~~ **0.0035** grains per dry standard cubic foot (gr/dscf) and ~~2.3~~ **2.0** pounds per hour (~~10.1~~ **8.8** tons per year).

(c) The PM/PM10 fugitive emissions generated during furnace operations shall be captured by the doghouse hood or contained within the melt shop building. Furthermore, ladle to tundish teeming **PM and PM10** emissions (insignificant activity) shall **each** not exceed 0.5 pounds per hour.

(d) The visible emissions from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.

(e) Except for scrap steel, slag and raw material handling and storage shall be conducted inside the melt shop building exclusively. Furthermore, slag pot and ladle slag dumping **PM and PM10** emissions (insignificant activity) shall **each** not exceed ~~0.6~~ **0.1** pound~~s~~ per hour.

(f) Carbon monoxide (CO) emissions from the EAF shall be captured and exhausted from the EAF baghouse stack for proper dispersion. Total melt shop CO emissions shall be limited to 10.5 pounds of CO emitted per ton of metal product based on a twenty-four hour averaging period, 23 tons per month, and 8.5 pounds of CO emitted per ton of metal product based on a one month averaging period from the baghouse.

(g) Volatile Organic Compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content. Kobelco Metal Powder of America shall charge only clean scrap, consistent with the Scrap Management Program for Kobelco on file with IDEM. Any changes made to the Scrap Management Program shall be submitted to IDEM, OAQ thirty (30) days prior to implementing the changes.

**The PM-10 emission limits include filterable and condensible PM10.**

These limits shall also satisfy the requirements of the NSPS, 40 CFR 60.272a, Subpart AAa listed in condition D.1.2(a)(1) and (3).

D.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] ~~[40 CFR 52.21]~~

Pursuant to ~~326 IAC 2-2-3(2), BACT, as determined in~~ CP-071-2546-00110, issued on December 10, 1993, the following shall apply to the drying rotary kiln (DRK) **in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions**:

(a) Process emissions from the DRK shall be exhausted through the 95% efficient wet scrubber exhausting from stack S-2;

(b) Fugitive emissions from the DRK shall be contained within the building;

(c) Visible emissions from any building opening as a result of the DRK shall be limited to 6% opacity in any one (1) six (6) minute averaging period.

(d) Particulate matter **(PM) and PM10 emissions** from the drying process shall **each** not exceed 0.3 pounds per hour;

(e) Pursuant to 326 IAC 2-2 and 6-5, the dryer air pollution control equipment operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

D.3.1 Prevention of Significant Deterioration [326 IAC 2-2] ~~[40 CFR 52.21]~~

Pursuant to ~~326 IAC 2-2-3(2) BACT, as determined in~~ CP-071-2546-00110, issued on December 10, 1993, **in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions:**

**(a)** the boiler (B1) shall burn only natural gas and shall be limited to 12.55 MMBtu per hour heat input. Combustion gases shall be vented to the atmosphere through stack S-3.

**(b) PM and PM10 emissions from the boiler (B1) shall each not exceed 0.1 pound per hour.**

D.4.1 Prevention of Significant Deterioration [326 IAC 2-2] [40 CFR 52.21]

(a) Pursuant to 326 IAC 2-2-3(2) BACT, as determined in CP-071-2546-00110, issued on December 10, 1993, and as determined pursuant to the BACT analysis submitted on February 3, 1999, and pursuant to Significant Source Modification No. 071-12450-00016, issued on August 11, 2000, and Minor Source Modification No. 071-12222-00016, issued August 31, 2000, **and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions,** the following shall apply to the two (2)

reduction/annealing furnaces (RF-1 and RF-2):

(1) RF-1 shall burn only natural gas and shall be limited to 18.0 MMBtu per hour heat input;
(2) RF-2 shall burn only natural gas and shall be limited to 18.0 MMBtu per hour heat input;
(3) CO emissions from RF-1 shall not exceed 1.0 pounds of CO per ton of semi-finished steel powder; and
(4) CO emissions from RF-2 shall not exceed 1.0 pounds of CO per ton of semi-finished steel powder.
(5) Visible emissions from stacks S-4 and S-5 shall not exceed 6% opacity in any one (1) six (6) minute averaging period.
**(6) PM and PM10 emissions from RF-1 shall each not exceed 0.13 pound per hour.**
**(7) PM and PM10 emissions from RF-2 shall each not exceed 0.13 pound per hour.**

(b) Pursuant to ~~326 IAC 2-2-3(2) BACT, as determined in~~ CP-071-2546-00110, issued on December 10, 1993, **in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions,** the following shall apply to the Metal Powder Classifying facility and the Pulverizing, Feather Mills, Classifying, Blending and Packaging facility:

(1) Emissions of PM and PM10 from conveying, product sieving and sizing, storage, and blending shall be controlled by a baghouse dust collection system (BS-1) with a minimum overall control efficiency of 99%.
(2) Emissions of PM and PM10 from the product surge hoppers shall be controlled by two (2) baghouse dust collection systems (BS-2a and BS-2b) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-2a and BS-2b, respectively.
(3) Emissions of PM and PM10 from all packaging systems shall be controlled by four (4) baghouse dust collection systems (BS-3a, BS-3b, BS-3c, and BS-3d) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-3a, BS-3b, BS-3c, and BS-3d, respectively.
(4) Fugitive emissions emitted from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.
(5) Particulate matter **(PM) and PM10** emissions from the Metal Powder Classifying facility shall **each** not exceed 0.03 pound per hour.
(6) Particulate matter **(PM) and PM10** emissions from the product surge hoppers shall **each** not exceed 0.02 pound per hour.
(7) Particulate matter **(PM) and PM10** emissions from all packaging systems shall **each** not exceed 0.02 pound per hour.

D.6.1 Prevention of Significant Deterioration [326 IAC 2-2] ~~[40 CFR 52.21]~~

Pursuant to ~~326 IAC 2-2-3(2) BACT, as determined in~~ CP-071-2546-00110, issued on December 10, 1993, **in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions, the following shall apply:**

**(a)** the ladle preheat unit, the two (2) tundish preheat units, and the flame suppression atomizer shall each burn only natural gas and shall each be limited to 2.33, 1.18, 1.18, and 1.45 MMBtu per hour heat input, respectively.
**(b) Total PM and PM10 emissions from the ladle preheat unit and the two (2) tundish**

**preheat units shall each not exceed 0.05 pound per hour.**

**(c) PM and PM10 emissions from the flame suppression atomizer shall each not exceed 0.01 pound per hour.**

**Comment #2**

Condition A.2 - Part 70 Source Definition - Praxair should not be included within the Kobelco Part 70 permit because Praxair is not under Kobelco's control. The applicable definition of "major source" includes "any group of stationary sources that are located on one (1) or mote contiguous or adjacent properties and are under common control of the same person (or persons under common control) belonging to a single major industrial grouping. See 326 IAC 2-7-1(22). Praxair is not under Kobelco's "control" and therefore Praxair's operations should not be included as part of Kobelco's Title V permit.

**Response #2**

The Clean Air Act, the federal Part 70 rules and the Indiana Title V rules define the term "source" based on several factors. In many cases, whether activities are a single "source" will be highly fact dependent. There are several tests used to make the determination in an individual case. A major source of any regulated air pollutant other than Hazardous Air Pollutants (HAPs) is defined as all activities located on contiguous or adjacent property under common control of the same person (or persons under common control) belonging to a single industrial grouping where the aggregate potential to emit for the activities exceeds the applicable Title V threshold.

For major sources of any regulated air pollutant other than HAPs, the relevant factors for determining which activities qualify as part of the source are whether the activities are located on contiguous or adjacent property, whether common control over the activities exists, and the activities must also belong to the same industrial grouping.

In this case since the plant owned by Kobelco and the hydrogen plant owned by Praxair are on the same property, these two plants are considered on contiguous property.

Each of the plants has a separate owner. Absent common ownership, common control may still exist. The IDEM endorses two tests for determining whether common control exists without common ownership. Both tests examine the relationship between the entities. If either test is satisfied, common control exists.

One of these tests is the but/for test. This test focuses on whether the auxiliary activity would exist absent the needs of the primary activity. If all or a majority of the output of the auxiliary activity is consumed by the primary activity the but/for test is satisfied. In this case, since all of the output of the hydrogen plant owned by Praxair is consumed by the Kobelco plant, this test is satisfied in this case.

Two tests exist for determining whether activities belong to the same industrial grouping. These are:
a. Same Standard Industrial Classification Code - If the activities are assigned the same two-digit Standard Industrial Classification (SIC) code as described in the 1987 SIC Manual, the activities belong to the same industrial grouping.

In this case the hydrogen plant owned by Praxair and Kobelco’s plant have two different SIC codes.

b. Support facility test - Absent the same two-digit SIC code, activities may belong to the same industrial grouping if one activity can be characterized as a support activity for a primary activity. Support facilities convey, store or otherwise assist in the production of the principal product or group of products produced or distributed or services rendered. The status of an activity as a support facility is established by examining the relationship between the functions performed by the secondary activity and the products produced or distributed or services rendered by the primary activity.

In this case, since the hydrogen gas supplied by the Praxair plant is an integral part of the production process at Kobelco's plant, and all of Praxair's hydrogen plant output is provided solely to the Kobelco plant, the Praxair plant is considered a support facility for the Kobelco plant.

Therefore, since the two plants are on contiguous property, the two plants are considered under common control because they satisfy the but/for test for common control, and they belong to the same industrial grouping, because the Praxair plant is a support facility for the Kobelco plant, OAQ has determined that the two plants are one major source. To clarify why these plants are being considered one source, condition A.2 has been revised as follows:

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This metal powder manufacturing company consists of a source with an on-site ~~contractor~~ **support facility**:

(a) Kobelco Metal Powder of America, Inc., Plant ID No. 071-00016, the primary operation, is located at 1625 Bateman Drive, Seymour, Indiana 47274; and

(b) Praxair's hydrogen plant, the supporting operation, is located at 1625 Bateman Drive, Seymour, Indiana 47274.

IDEM has determined that Kobelco Metal Powder of America, Inc. and the hydrogen plant owned by Praxair are under the common control of Kobelco Metal Powder of America, Inc. **because they satisfy the but/for test for common control.** These two plants are considered one source ~~due to contractual control~~ **because the two plants are on contiguous property, the two plants are under common control, and they belong to the same industrial grouping, since the Praxair plant is a support facility for the Kobelco plant**. Therefore, the term "source" in the Part 70 documents refers to both Kobelco Metal Powder of America, Inc. and the hydrogen plant owned by Praxair as one source.

One combined Part 70 permit will be issued to Kobelco Metal Powder of America, Inc. and Praxair. The new plant ID for the combined source is 071-00016.

**Comment #3**

Condition A.3 - Emission Units and Pollution Control Equipment Summary - Several changes should be made to this section, including the following:

a. Condition A.3(b) should be changed as follows to indicate that the drying rotary kiln was replaced with an identical unit in August 2002:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5 (15)].

This stationary source consists of the following emission units and pollution control devices:

(b) one (1) rotary kiln (DRK), ~~constructed in 1989~~ **originally constructed in 1989 and replaced with an identical unit in 2002**, drying a maximum of 15 tons of wet-powdered steel per hour, with a wet scrubber for particulate matter control, exhausting through one (1) stack (S-2);

b. Condition A.3(d) should be changed as follows to indicate that there are multiple burners in RF-1, whose cumulative capacity is 18 mmBtu, not that there is a single burner:

(d) one (1) natural gas fired reduction/annealing furnace (RF-1), constructed in 1989, equipped with ~~one (1)~~ **multiple** natural gas-fired burner**s** that ~~was~~ **were** added in 2000, rated **cumulatively** at 18.0 MMBtu per hour, processing a maximum of 6.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-4);

c. Condition A.3(e) should be changed as follows to indicate that there are multiple burners in RF-2, whose cumulative capacity is 18 mmBtu, not that there is a single burner:

(e) one (1) natural gas fired reduction/annealing furnace (RF-2), constructed in 1995, equipped with ~~one (1)~~ **multiple** natural gas-fired burner**s** that ~~was~~ **were** added in 2000, rated **cumulatively** at 18.0 MMBtu per hour, processing a maximum of 5.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-5);

d. As we discussed, Conditions A.3(f) and (g) should remove all references to BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d, because those baghouses are for industrial hygiene purposes only. If those references are not removed, Condition A.3(f) should be changed as follows to indicate: (1) that BS-1 only covers the classifying facility, after drying, not the conveying, product sieving and sizing, storage, and blending facility, and (2) that no storage or blending occurs at this location:

(f) Metal Powder Classifying Facility including the following

(1) Conveying, product sieving and sizing~~, storage, and blending all~~ controlled by one (1) baghouse dust collection system (BS-1) **which is connected to the screening facility;**

e. If the references to these baghouses are not removed, Condition A.3(h)(8) should be modified to indicate that there is only one bag filter (BF-2a) that is associated with premix line; BF-2b is the same as BS-3d referenced above. At a minimum, Condition A.3(h)(8) should be modified as follows:

(h) one (1) Premix line; constructed in 2001, consisting of the following equipment:

(8) ~~two (2)~~ **one (1)** area bag filter~~s~~ (BF-2a ~~and BF-2b~~) for industrial hygiene purposes.

f. Conditions A.3(i) and (j) includes various insignificant activities that should be removed and placed under the specifically regulated insignificant activities, if there are specific regulatory requirements attached to them. Accordingly, those sections should be modified as follows, and should be added to Condition A.4 as described below:

(i) one (1) base metal powder and additive process for the new Premix line blender, constructed in 2001.~~, consisting of the following:~~

~~(1) one (1) bulk pack lift conveyor (CL-1);~~
~~(2) one (1) 5 ton base powder charging hopper (H-1); and~~
~~(3) one (1) base powder lift conveyor (CL-2).~~

(j) one (1) laboratory scale pilot blender line (LSP-1), constructed in 2001.~~, consisting of the following equipment:~~

~~(1) one (1) 100 gallon binder preparation tank, identified as T-7;~~
~~(2) one (1) 10 gallon charging tank, identified as T-8;~~
~~(3) one (1) blender, identified as BL-2, with a maximum production capacity of 500 pounds of product per batch (or 333.3 pounds of product per hour), with a process dust collector (BF-3) to insure proper condenser operation, and a toluene condenser (HX-2), vacuum pump (Vacuum Pump-2), and chiller unit (CH-2) with pump (Pump-1) to recover toluene solvent; and~~
~~(4) one (1) 20 gallon condensate tank, identified as T-9.~~

All of these comments on the General Descriptions should be carried forward into the appropriate descriptions in the D sections.

**Response #3**

a. The applicability of 326 IAC 2-7-10.5 is based only on the potential to emit of the new unit. Pursuant to 326 IAC 2-7-10.5(b), if the replacement results in a potential to emit for each regulated pollutant that is less than or equal to the potential to emit of the emission unit that is replaced, the replacement is not a major modification under 326 IAC 2-2 (PSD) or 326 IAC 2-4.1, and the replacement returns the emissions unit, process, or control equipment to normal operation after an upset, malfunction, or mechanical failure or prevents impending and imminent failure of the emissions unit, process, or control equipment, then the replacement does not require prior approval. However, if the replacement is a complete replacement of an emissions unit, and would require a modification approval based on the potential to emit of the new unit, then the owner or operator of the source is required to submit a permit application to the OAQ no later than thirty (30) days after initiating the replacement.

In this case, since the replacement resulted in a potential to emit for each regulated pollutant that was less than or equal to the potential to emit of the original DRK that was replaced, the replacement was not a major modification under 326 IAC 2-2 (PSD) or 326 IAC 2-4.1, and it prevented impending failure of the DRK, it did not require prior approval pursuant to 326 IAC 2-7-10.5(b). However, since this was a complete replacement of an emissions unit, and based on the potential emissions from the new DRK, the replacement would require a minor source modification approval under 326 IAC 2-7-10.5(d), the source was required to submit a source modification application to the OAQ within thirty (30) days of the initiating the replacement. Therefore, this unit

is now considered as an unpermitted emission unit and IDEM is taking appropriate action on this matter. The equipment description for the drying rotary kiln in sections A.3(b) and D.2 is revised to read as follows:

(b) one (1) drying rotary kiln (DRK), constructed in ~~1989~~ **2002 to replace the original DRK**, drying a maximum of 15 tons of wet powdered steel per hour, with a wet scrubber for particulate matter control, exhausting through one (1) stack (S-2);

b, c. The equipment descriptions for RF-1 and RF-2 in section A.3(d), A.3(e), and D.4 are revised to read as follows:

(d) one (1) natural gas fired reduction/annealing furnace (RF-1), constructed in 1989, equipped with ~~one (1)~~ **multiple** natural gas-fired burner**s** that ~~was~~ **were** added in 2000, rated **cumulatively** at 18.0 MMBtu per hour, processing a maximum of 6.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-4);

(e) one (1) natural gas fired reduction/annealing furnace (RF-2), constructed in 1995, equipped with ~~one (1)~~ **multiple** natural gas-fired burner**s** that ~~was~~ **were** added in 2000, rated **cumulatively** at 18.0 MMBtu per hour, processing a maximum of 5.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-5);

d. As stated in Response #1 above, the controls on these operations are necessary to comply with the PM and PM10 emission limits in order to render 326 IAC 2-2 (PSD) not applicable for these pollutants. Therefore, references to all controls on these operations, including BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d, are retained in the permit.

In CP-071-2546-00110, issued to Kobelco on December 10, 1993, the Metal Powder Classifying Facility is listed as including conveying, sieving, sizing, storage, and blending. However, the inspector for this source has stated that baghouse BS-1 is installed and controls classifying which consists of one (1) screen and one (1) conveyor and that everything else is totally enclosed. Since everything included in the metal powder classifying facility is either controlled by baghouse BS-1 or totally enclosed, the emission unit description in sections A.3(f) and D.4 has been revised as follows to indicate: (1) that BS-1 only covers the classifying facility which includes one (1) screen (which is used to perform product sieving and sizing) and one (1) conveyor, and not storage and blending, and (2) that no storage or blending occurs at this location:

(f) Metal Powder Classifying Facility including the following

(1) **One (1) conveyor** ~~Conveying, product sieving and sizing, storage, and blending all~~ **and one (1) screen, for product sieving and sizing,** controlled by one (1) baghouse dust collection system (BS-1);

Storage occurs in the surge hoppers controlled by baghouse dust collectors BS-2a and BS-2b, and blending occurs in the packaging facility controlled by baghouse dust collectors BS-3a, BS-3b, BS-3c, and BS-3d. In order to clarify this, the emission unit description for the packaging systems is revised to read as follows:

(g) Pulverizing, Feather Mills, Classifying, Blending and Packaging Facility including the following:

(1) Pulverizing surge hoppers for RF-1 and RF-2, controlled by two (2) baghouse dust

collectors (BS-2a and BS-2b);

(2) **Blender** ~~P~~**p**ackaging systems controlled by four (4) baghouse dust collectors (BS-3a, BS-3b, BS-3c, and BS-3d);

e. Section A.3(h)(8) and D.5 have been revised as follows:

(h) one (1) Premix line, constructed in 2001, consisting of the following equipment:

(8) ~~two (2)~~ **one (1)** area bag filter~~s~~ (BF-2a ~~and BF-2b~~) for industrial hygiene purposes.

f. The VOC emissions, which are 100% toluene, a HAP, from the Premix line and the pilot blender combined are 9.64 tons per year. Since single HAP emissions are greater than 1 ton per year, the Premix line and pilot blender facilities, including all of the equipment included in section A.3(i) and (j) do not meet the definition of an insignificant activity. Therefore, no changes have been made to the permit as a result of this comment.

**Comment #4**

Condition A.4 - Specifically Regulated Insignificant Activities - Condition A.4(b) should be removed since there are no degreasing operations at the plant, and the relevant portions of A.3(i) and (j) should be added as follows:

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1 (21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including the following:
(1) one (1) 2.33 MMBtu per hour ladle preheat unit;
(2) two (2) 1.18 MMBtu per hour tundish preheat units; and
(3) one (1) 1.45 MMBtu per hour flame suppression atomizer. [326 IAC 2-2] [40 CFR 52.21]

~~(b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, including one (1) small cold cleaner degreaser used for maintenance purposes [326 IAC 8-3-2].~~

~~(c)~~**(b)** Activities with particulate matter emissions equal to or less than 5 pounds per hour or 25 pounds per day:
(1) Ladle to tundish teeming. [326 IAC 6-3-2]
(2) Fugitive emissions from material handling. [326 IAC 6-4]
(3) Fugitive emissions from slag handling in the melt shop building. [326 IAC 6-4]

**(c) The following activities at the Premix line blender:**

**(1) one (1) bulk pack lift conveyor (CL-1);**
**(2) one (1) 5 ton base powder charging hopper (H-1); and**
**(3) one (1) base powder lift conveyor (CL-2).**

**(d) The following equipment at the laboratory scale pilot blends line:**

**(1) one (1) 100 gallon binder preparation tank, identified as T-7;**
**(2) one (1) 10 gallon charging tank, identified as T-8;**

**(3) one (1) blender, identified as BL-2, with a maximum production capacity of 500 pounds of product per batch (or 333.3 pounds of product per hour), with a process dust collector (BF-3) to insure proper condenser operation, and a toluene condenser (HX-2), vacuum pump (Vacuum Pump-2), and chiller unit (CH-2) with pump (Pump-1) to recover toluene solvent; and**
**(4) one (1) 20 gallon condensate tank, identified as T-9.**

**Response #4**

For the reasons given in response #3, paragraph f above, no changes have been made to the descriptions for the equipment associated with the Premix line and the pilot blender in section A.3 (i) and (j). However, since the source no longer performs any degreasing operations, paragraph (b) of section A.4 has been deleted as follows:

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including the following:
(1) one (1) 2.33 MMBtu per hour ladle preheat unit;
(2) two (2) 1.18 MMBtu per hour tundish preheat units; and
(3) one (1) 1.45 MMBtu per hour flame suppression atomizer. [326 IAC 2-2][40 CFR 52.21]

~~(b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, including one (1) small cold cleaner degreaser used for maintenance purposes [326 IAC 8-3-2].~~

~~(c)~~**(b)** Activities with particulate matter emissions equal to or less than 5 pounds per hour or 25 pounds per day:
(1) Ladle to tundish teeming. [326 IAC 6-3-2]
(2) Fugitive emissions from material handling. [326 IAC 6-4]
(3) Fugitive emissions from slag handling in the melt shop building. [326 IAC 6-4]

Since there are no degreasers at the source, conditions D.6.2 and D.6.3 have been deleted as follows:

~~D.6.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]~~

~~Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:~~

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.6.3 Volatile Organic Compounds (VOC) [326 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32)

~~millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):~~

~~(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.~~

~~(B) A water cover when solvent is used is insoluble in, and heavier than, water.~~

~~(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.~~

~~(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:~~

~~(1) Close the cover whenever articles are not being handled in the degreaser.~~

~~(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.~~

~~(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.~~

**Comment #5**

Condition C.12 - Maintenance of Continuous Emission Monitoring Equipment - Kobelco voluntarily installed the CO monitor, and continues to operate it voluntarily. It was never required to be operated under the PSD permit. Therefore, Condition C.12(d) should be deleted as follows:

C.12 Maintenance and Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

~~(d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and CP-071-2546-00110, issued on December 10, 1993.~~

In addition, we request that the requirement to replace the CEM within four hours be deleted because it is not justifiable. Therefore, Condition C.12(c) should be deleted as follows:

C.12 Maintenance and Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

~~(c) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, a calibrated backup CEMS shall be brought online within four (4) hours of shutdown of the~~

~~primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.~~

**Response #5**

With regard to the CO emissions monitor, the language in CP-071-2546-00110, issued on December 10, 1993, condition 17 made it clear that IDEM reserved the right to require CO emissions monitoring. That is essentially what the OAQ Office of Enforcement did in the Agreed Order that was effective as of July 20, 1999. The Agreed Order (Cause No. A-4189, later amended to Cause No. A-3148) required installation and operation of new CO emissions monitoring equipment. Therefore, since the Agreed Order now requires the CO monitor, and given the CO issues prior to the Agreed Order in 1999, IDEM exercised its authority to require the monitor as stated in CP-071-2546-00110.

The authority for the requirement to replace the Continuous Emissions Monitor (CEM) within four (4) hours is from 326 IAC 2-7-5(3)(A)(iii). However, in this case, if it is not possible for the source to have a calibrated back up CEM brought online within four hours of shutdown of the primary CEM, IDEM will allow the source to have up to ten (10) days to have a calibrated back up CEM brought online. However, this does not exempt the source from the requirement to operate a CEMS pursuant to 326 IAC 3-5. To allow for this, condition C.12 of the Part 70 permit is revised as follows:

C.12 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.

**(b) All continuous emission monitoring systems shall meet all applicable performance specifications of 40 CFR 60 or any other performance specification, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.**

~~(b)~~**(c)** In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

~~(c)~~**(d)** Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, a calibrated backup CEMS shall be brought online within ~~four (4) hours~~ **ten (10) days** of shutdown of the primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.

~~(d)~~**(e)** Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and CP-071-2546-00110, issued on December 10, 1993 **and 326 IAC 3-5**.

**Comment #6**

Condition D.1.3(a) - Prevention of Significant Deterioration (PSD) - Condition D.1.3(a) should be modified to indicate that the maximum design capacity of the doghouse is 120,000 acfm, but the amount of acfm required at any point in time is the amount demonstrated by stack tests to comply with the appropriate permit limit. Condition D.1.3(a) should be modified as follows:

D.1.3 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21] [40 CFR 52.124]

(a) The EAF shall be operated within the enclosure controlled by ~~an 86,800 acfm~~ **a** doghouse evacuation system, **with a maximum design rating of 120,000 acfm and with the minimum acfm established during the most recent stack test,** ducted to a baghouse with an 85 feet tall dispersion stack. Pursuant to 326 IAC 2-2 and 6-5, the fugitive dust control and baghouse operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

**Response #6**

Since the requirement to operate the doghouse evacuation system at a flow rate of 86,800 acfm was part of the PSD BACT limit pursuant to 326 IAC 2-2-3(2), established in CP 071-2546-00110, issued on December 10, 1993, this will not be removed from condition D.1.3. However, recognizing that stack testing could indicate that the EAF could still be in compliance with the particulate matter emission limits while the doghouse is operating at a different flow rate, the condition will be revised to allow for operation at a different flow rate established during the most recent stack test. Condition D.1.3(a) is revised to read as follows:

(a) The EAF shall be operated within the enclosure controlled by ~~an 86,800 acfm~~ **a** doghouse evacuation system **with a minimum flow rate of 86,800 acfm, or a minimum flow rate established in the most recent stack test**, ducted to a baghouse with an 85 feet tall dispersion stack. Pursuant to 326 IAC 2-2 and 6-5, the fugitive dust control and baghouse operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

**Comment #7**

Condition D.1.3(b) - Prevention of Significant Deterioration (PSD) - The emission limit of 2.3 lbs/hr should be increased to account for filterable and condensible emissions. This limit was originally established on the basis of filterable emissions only. However, Condition D.1.6 states that PM10 includes both filterable and condensible PM10. Based on our evaluation, the appropriate PM10 limit when including filterable and condensible is 3.2 lbs/hour, with the same grain loading as is currently specified. If filterable and condensible emissions comprise this limit, the limit should be increased to take into account condensible PM10, as follows:

(b) The particulate matter (PM/PM10) from the melt shop baghouse stack (S-6) shall be limited to 0.004 grains per dry standard cubic foot (gr/dscf) and ~~2.3~~ **3.2** pounds per hour (~~10.1~~ **14** tons per year).

**Response #7**

As noted in response #1 above, it has been determined by the OAQ that additional limits for PM and PM10 emissions need to be included in the Title V permit from the units permitted under CP 071-2546-00110 (PSD permit), issued to this source on December 10, 1993, of less than 25 and 15 tons per year, respectively, so that the requirements of 326 IAC 2-2 (PSD) do not apply for PM and PM10 emissions. The PM and PM10 emission limits in condition D.1.3 have been revised so that combined limited PM and PM10 emissions from the units permitted under CP 071-2546-00110, listed in sections D.1 through D.4 and D.6 of the Part 70 permit, are less than 25 and 15 tons per year, respectively. The emission limits, which were applied to both PM and PM-10 emissions, were calculated based on maintaining emissions under the lower of the two significant thresholds of 25 tons per year for PM and 15 tons per year for PM-10. The emission limits from the meltshop baghouse stack (S-6) now have been lowered to 0.0035 gr/dscf or 2.0 pounds per hour to allow for differences in the emission factors used for natural gas combustion and changes to the heat input ratings of the reduction/annealing furnaces while maintaining total allowable PM-10 emissions from the units permitted under CP 071-2546-00110 at less than 15 tons per year. The PM-10 limits include filterable and condensible PM10. As shown in response #1 above, condition D.1.3 is revised as follows:

D.1.3 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21] [40 CFR 52.124]

Pursuant to 326 IAC 2-2-3(2), Best Available Control Technology (BACT) **for carbon monoxide (CO) emissions**, as determined in CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, **and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions,** the following shall apply to the EAF:

(a) The EAF shall be operated within the enclosure controlled by an 86,800 acfm doghouse evacuation system, ducted to a baghouse with an 85 feet tall dispersion stack. Pursuant to 326 IAC 2-2 and 6-5, the fugitive dust control and baghouse operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

(b) The particulate matter (PM/PM10) **emissions** from the melt shop baghouse stack (S-6) shall be limited to ~~0.004~~ **0.0035** grains per dry standard cubic foot (gr/dscf) and ~~2.3~~ **2.0** pounds per hour (~~10.1~~ **8.8** tons per year).

(c) The PM/PM10 fugitive emissions generated during furnace operations shall be captured by the doghouse hood or contained within the melt shop building. Furthermore, ladle to tundish teeming **PM and PM10** emissions (insignificant activity) shall **each** not exceed 0.5 pounds per hour.

(d) The visible emissions from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.

(e) Except for scrap steel, slag and raw material handling and storage shall be conducted inside the melt shop building exclusively. Furthermore, slag pot and ladle slag dumping **PM and PM10** emissions (insignificant activity) shall **each** not exceed ~~0.6~~ **0.1** pound~~s~~ per hour.

(f) Carbon monoxide (CO) emissions from the EAF shall be captured and exhausted from the EAF baghouse stack for proper dispersion. Total melt shop CO emissions shall be limited to 10.5 pounds of CO emitted per ton of metal product based on a twenty-four hour averaging period, 23 tons per month, and 8.5 pounds of CO emitted per ton of metal product based on a one month averaging period from the baghouse.

(g) Volatile Organic Compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content. Kobelco Metal Powder of America shall charge only clean scrap, consistent with the Scrap Management Program for Kobelco on file with IDEM. Any changes made to the Scrap Management Program shall be submitted to IDEM, OAQ thirty (30) days prior to implementing the changes.

**The PM-10 emission limits include filterable and condensible PM10.**

These limits shall also satisfy the requirements of the NSPS, 40 CFR 60.272a, Subpart AAa listed in condition D.1.2(a)(1) and (3).

**Comment #8**

Condition D.1.3(f) - Prevention of Significant Deterioration (PSD) - The permit should allow a rate of 5% of exceedances of the 24-hour CO limit. The permit establishes a 24-hour CO limit of 10.5 lbs from the melt shop. This limit was developed based on a 95% confidence level, and therefore the permit should allow a 5% exceedance level. Monthly and annual limits also exist and would be protective of the environment. Accordingly, Condition D.1.3(f) should be modified as follows:

(f) Carbon monoxide (CO) emissions from the EAF shall be captured and exhausted from EAF baghouse stack for proper dispersion. Total melt shop CO emissions shall be limited to 10.5 pounds of CO emitted per ton of metal product based on a twenty-four hour averaging period, 23 tons per month, and 8.5 pounds of CO emitted per ton of metal product based on a one month averaging period from the baghouse. **The Permittee shall be allowed 5% of exceedances of the 24-hour emission limit based on a 12-month period.**

**Response #8**

As stated in the TSD for CP-071-2546-00110, issued on December 10, 1993, the 24 hour average CO emission limit of 10.5 pounds per ton of metal produced established pursuant to 326 IAC 2-2-3(2), BACT, was based on statistical stack test data obtained at the existing furnace, with a 95% probability of compliance based on a 24 hour heat by heat averaging technique. This information was included to provide an explanation of how this limit was established. It was not intended to allow the source 5% of exceedances of the limit. As an average limit, the 24 hour CO emission limit already allows for exceedances of the limit as long as the average over a 24 hour period does not exceed 10.5 pounds per ton. Considering the past compliance problems of this source with the CO emission limits in the original PSD permit, which resulted in issuance of an Agreed Order by the Office of Enforcement, the CO emission limit can only be revised by undergoing a major PSD review to justify it.

**Comment #9**

Condition D.1.9(b) - Monitoring - Subsection (b) should be modified to indicate that Kobelco will comply using option (1), not option (2). Kobelco also requests that a twenty-four hour averaging period be specified for the volumetric flow rate requirement. The current language could be viewed as requiring an instantaneous flow value, whereas the flow value established in a stack test is based on an average over time. Kobelco requests that the averaging period be established on a reasonable time basis, such as twenty-four hour

averages. Accordingly, Condition D.1.9(b) should be modified as follows:

D.1.9 Monitoring [40 CFR 60, Subpart AAa]

(b) Pursuant to 40 CFR 60.274a(b), except as provided under 40 CFR 60.274a(d), the Permittee is required to check and record the furnace static pressure if a direct-shell evacuation control (DEC) system is in use and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. Since a DEC system is not used with the EAF at this source, it is not necessary for the Permittee to check and record the furnace static pressure. However, the source has indicated that of the remaining monitoring requirements listed as (1) or (2) above, it will comply with option ~~(2)~~ **(1)**.

The EAF is enclosed by a doghouse type enclosure. The source will install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through the doghouse enclosure (which performs the function of a hood). **For purposes of determining compliance with the minimum flow requirements established in the previous stack test, the volumetric flow rate will be evaluated on the basis of twenty-four hour operating time averages.** The monitoring device may be installed in any appropriate location in the exhaust duct of the doghouse such that reproducible flow rate monitoring will result. The flow rate monitoring device shall have an accuracy ± 10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. IDEM, OAQ may require the Permittee to demonstrate the accuracy of this monitoring device relative to Methods 1 and 2 of appendix A of 40 CFR Part 60.

**Response #9**

Since the source has indicated that it will monitor the volumetric flow rate through the doghouse enclosure, and not check and record the control system fan motor amperes and damper positions on a once-per-shift basis, it has clearly chosen option (2) as listed in the first paragraph of section (b) of condition D.1.9. Therefore, this paragraph has not been revised as requested.

The rule, 40 CFR 60, Subpart AAa, clearly requires that the volumetric flow rate must be monitored continuously. As stated in paragraph (c) of condition D.1.9, pursuant to 40 CFR 60.274a(c), “when the Permittee is required to demonstrate compliance with the standard under 40 CFR 60.272a(a)(3) and at any other time that IDEM, OAQ may require, that either the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b)(1) or (b)(2) of 40 CFR 40.274a. The Permittee may petition IDEM, OAQ for reestablishment of these parameters whenever the Permittee can demonstrate to IDEM, OAQ’s satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. Operation at other than baseline values may be subject to the requirements of 40 CFR 60.276a(c).”

Pursuant to 40 CFR 60.276a(c), as stated in condition D.1.9(i), operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the IDEM, OAQ to be unacceptable operation and maintenance of the affected facility. This precludes the use of averaging to demonstrate compliance with the flow rate requirements. No changes have been made as a result of this comment.

**Comment #10**

Condition D.1.9(f)(2) - Monitoring - The reference to maintaining pressure inside the doghouse enclosure should be removed because it is not required by the NSPS, and is not easily obtainable or useful. Accordingly, Condition D.1.9(f)(2) should be modified as follows:

(f) Pursuant to 40 CFR 60.274a(h), during any performance test required under 40 CFR 60.8, and for any report thereof required by 40 CFR 60.275a(d), or to determine compliance with 40 CFR 60.272a(a)(3), the Permittee shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;
(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing ~~and the pressure inside the doghouse enclosure~~;
(3) Control device operation log; and
(4) Continuous monitor or Reference Method 9 data.

**Response #10**

After reviewing the monitoring requirements included in 40 CFR 60.274a(h), the pressure inside the EAF, not the doghouse enclosure, is only required to be monitored when direct-shell evacuation control (DEC) systems are used. Since this source does not use a DEC system with the EAF, monitoring of the pressure inside the EAF or the doghouse enclosure is not required. Therefore, condition D.1.9(f)(2) is revised to read as follows:

D.1.9 Monitoring [40 CFR 60, Subpart AAa]

(f) Pursuant to 40 CFR 60.274a(h), during any performance test required under 40 CFR 60.8, and for any report thereof required by 40 CFR 60.275a(d), or to determine compliance with 40 CFR 60.272a(a)(3), the Permittee shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;
(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing ~~and the pressure inside the doghouse enclosure~~;
(3) Control device operation log; and
(4) Continuous monitor or Reference Method 9 data.

**Comment #11**

Condition D.2.3 - Particulate Control - This condition should be deleted because the scrubber does not accept emissions from a fan system and then control them, such that emissions would escape if the scrubber was not operating. On the contrary, the scrubber pulls steam out of the dryer to improve the dryer efficiency and therefore the scrubber causes the emissions to be vented, and cleans the air before they are vented. If the scrubber is not operating, there is no reason to shut the dryer down because the emissions would not be occurring. There is no justification for requiring that the scrubber be in operation at all times the kiln is in operation. Accordingly, Condition D.2.3 should be deleted as follows:

~~D.2.3 Particulate Control~~

~~In order to comply with Condition D.2.1, the wet scrubber for PM control shall be in operation and control emissions from the drying rotary kiln (DRK) at all times that the drying rotary kiln (DRK) is in operation.~~

**Response #11**

The IDEM inspector for this source agrees that there are no process emissions from the DRK when the scrubber is not operating since these emissions only occur when the scrubber is in operation to pull steam out of the dryer. However, since the requirement to control process emissions from the DRK with a 95% efficient wet scrubber must be included to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply, condition D.2.3 will not be deleted from the permit but is instead revised to read as follows:

D.2.3 Particulate Control

In order to comply with Condition D.2.1, the wet scrubber for PM control shall be in operation and control **process** emissions from the drying rotary kiln (DRK) at all times that **process emissions are exiting** the drying rotary kiln (DRK)~~ is in operation~~.

**Comment #12**

Condition D.2.7 - Wet Scrubber Failure Detection - For the reasons set out in the prior comment, the phrase "and the associated process" and the related portions of this condition should be deleted from this condition as follows:

D.2.7 Wet Scrubber Failure Detection

In the event that scrubber failure has been observed:

Failed unit~~s and the associated process~~ will be shut down immediately until the failed unit~~s have~~ **has** been repaired or replaced. ~~Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

**Response #12**

Since there are no process emissions from the DRK when the scrubber is not in operation, it is not necessary for the entire process to be shut down if scrubber failure is observed. Therefore, condition D.2.7

is revised to read as follows:

D.2.7 Wet Scrubber Failure Detection

In the event that scrubber failure has been observed:

**The** ~~F~~**f**ailed unit~~s and the associated process~~ will be shut down immediately until the failed unit~~s have~~ **has** been repaired or replaced. ~~Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

**Comment #13**

Condition D.3.4(a) - Record Keeping Requirements - Subsection (a) should be modified to allow record keeping of monthly natural gas combustion, rather than daily. Kobelco utilizes a computerized totalizer, and no justification exists why daily numbers should be utilized or that Kobelco should have to incur the expense of generating those daily numbers. The original permit required only that a monthly gas consumption record be kept, with that value averaged over the days in the month. No justification exists for different or more stringent requirements. Accordingly, Condition D.3.4(a) should be modified as follows:

D.3.4 Record Keeping Requirements

(a) To document compliance with Condition D.3.1, the Permittee shall record the amount of natural gas combusted per ~~day~~ **month**.

**Response #13**

Since CP-071-2546-00110, issued to this source on December 10, 1993, only required the source to report monthly usage with the average daily usage per month, the record keeping requirement for the natural gas usage shall be changed to monthly with a record of the average daily usage per month. Condition D.3.4 is revised to read as follows:

D.3.4 Record Keeping Requirements

(a) To document compliance with Condition D.3.1, the Permittee shall record the amount of natural gas combusted per ~~day~~ **month, including the average daily natural gas usage in each month**.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Comment #14**

Condition D.4.1 - Prevention of Significant Deterioration - Many changes should be made to subsection (b), including: (1) the heading should be changed to indicate that these requirements are not PSD requirements since only CO was subject to PSD/BACT; and (2) subsections (b)(1), (b)(2), and (b)(3) should be deleted because they are insignificant activities and the baghouse dust collection systems BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d are not PSD or BACT requirements [see Comment No.1]. Accordingly, Condition D.4.1 should be modified as follows:

D.4.1 ~~Prevention of Significant Deterioration~~ **Permit Requirements** [326 IAC 2-2][40 CFR 52.21]

(b) Pursuant to ~~326 IAC 2-2-3(2) BACT, as determined in~~ **Permit No.** CP-071-2546-00110, issued on December 10, 1993, the following shall apply to the Metal Powder Classifying facility and the Pulverizing, Feather Mills, Classifying, Blending and Packaging facility:

~~(1) Emissions of PM and PM10 from conveying, product sieving and sizing, storage, and blending shall be controlled by a baghouse dust collection system (BS-1) with a minimum overall control efficiency of 99%.~~

~~(2) Emissions of PM and PM10 from the product surge hoppers shall be controlled by two (2) baghouse dust collection systems (BS-2a and BS-2b) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-2a and BS-2b, respectively.~~

~~(3) Emissions of PM and PM10 from all packaging systems shall be controlled by four (4) baghouse dust collection systems (BS-3a, BS-3b, BS-3c, and BS-3d) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-3a, BS-3b, BS-3c, and BS-3d, respectively.~~

~~(4)~~**(1)** Fugitive emissions emitted from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.

~~(5)~~**(2)** Particulate matter emissions from the Metal Powder Classifying facility shall not exceed 0.03 pound per hour.

~~(6)~~**(3)** Particulate matter emissions from the product surge hoppers shall not exceed 0.02 pound per hour.

~~(7)~~**(4)** Particulate matter emissions from all packaging systems shall not exceed 0.02 pound per hour.

**Response #14**

As stated in response #1, during IDEM's review of CP 071-2546-00110 (PSD permit), issued to this source on December 10, 1993, it was determined that controlled PM and PM10 emissions were below the significant levels of 25 and 15 tons per year, respectively, and did not undergo PSD review. However, since potential PM and PM10 emissions were greater than these levels, limits were included in CP 071-2546-00110 for PM and PM10 emissions to ensure that the PSD significant levels were not exceeded. This is stated in response no. 4 of the TSD Addendum for that permit. Therefore, the particulate matter emission limits established for the conveyor and screen for product sieving and sizing, controlled by baghouse BS-1, the product surge hoppers, controlled by baghouse dust collection systems BS-2a and BS-2b, and from all packaging systems, controlled by baghouse dust collection systems BS-3a, BS-3b, BS-3c, and BS-3d, are required to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. Based on the emission calculations for these operations, the controls on these operations are necessary to comply with the PM and PM10 emission limits. Therefore, references to all controls on these operations, including BS-2b, BS-3b, BS-3c, and BS-3d, will remain in the permit.

Since these are limits to render 326 IAC 2-2 (PSD) not applicable, the condition will be revised to remove the statement that the limits are pursuant to 326 IAC 2-2. Instead, a statement will be added stating that these limits render 326 IAC 2-2 (PSD) not applicable. Also, since it has been determined that the baghouse BS-1 only controls emissions from the conveyor and screen for product sieving and sizing, condition D.4.1(b) is further revised as follows:

D.4.1 Prevention of Significant Deterioration [326 IAC 2-2] [40 CFR 52.21]

(b) Pursuant to ~~326 IAC 2-2-3(2) BACT, as determined in~~ CP-071-2546-00110, issued on December 10, 1993, **in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions,** the following shall apply to the Metal Powder Classifying facility and the Pulverizing, Feather Mills, Classifying, Blending and Packaging facility:

(1) Emissions of PM and PM10 from ~~conveying, product sieving and sizing, storage, and blending~~ **the conveyor and screen for product sieving and sizing** shall be controlled by a baghouse dust collection system (BS-1) with a minimum overall control efficiency of 99%.

(2) Emissions of PM and PM10 from the product surge hoppers shall be controlled by two (2) baghouse dust collection systems (BS-2a and BS-2b) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-2a and BS-2b, respectively.

(3) Emissions of PM and PM10 from all **blender** packaging systems shall be controlled by four (4) baghouse dust collection systems (BS-3a, BS-3b, BS-3c, and BS-3d) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-3a, BS-3b, BS-3c, and BS-3d, respectively.

(4) Fugitive emissions emitted from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.

(5) Particulate matter **(PM) and PM10** emissions from the Metal Powder Classifying facility shall **each** not exceed 0.03 pound per hour.

(6) Particulate matter **(PM) and PM10** emissions from the product surge hoppers shall **each** not exceed 0.02 pound per hour.

(7) Particulate matter **(PM) and PM10** emissions from all packaging systems shall **each** not exceed 0.02 pound per hour.

**Comment #15**

Condition D.4.3(b) - Testing Requirements - Subsection (b) should be deleted because no justification exists for requiring stack testing for these seven baghouse units. First of all, the units should not be included in the permit. Even if they are included in the permit, however, the emissions from these areas are so small that testing is an unjustifiable burden. Accordingly, Condition D.4.3(b) should be deleted as follows:

D.4.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

~~(b) Within 180 days after issuance of this Part 70 permit, in order to demonstrate compliance with Condition D.4.1(b), the Permittee shall perform PM and PM-10 testing on each of the baghouse dust collection systems identified as BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.~~

**Response #15**

As stated in response #1 above, the OAQ has determined that testing of each of the baghouses for these operations is necessary in order to determine compliance with the PM and PM10 emission limits to render

326 IAC 2-2 (PSD) not applicable for PM and PM10. Representative testing on one unit instead of several units can only be performed for identical emission units. Since each of the baghouses are controlling different portions of these processes, they are not identical and testing must be performed on each baghouse to determine compliance.

**Comment #16**

Condition D.4.4 - Particulate Matter (PM) - This condition should be deleted because the baghouses should not be included in this permit, per the request submitted by Kobelco. In addition, these baghouses are for industrial hygiene purposes, not for pollution control. In addition, the baghouses were never designed for all of the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems. Nowhere in the original permit was that included, and in fact, the application included totally different references for these industrial hygiene baghouses. Accordingly, Condition D.4.4 should be deleted as follows:

~~D.4.4 Particulate Matter (PM)~~

~~Pursuant to CP-071-2546-00110, issued on December 10, 1993, and in order to comply with Condition D.4.1(b), the baghouse dust collection systems for PM control shall be in operation and control emissions from the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems at all times that these activities are in operation.~~

**Response #16**

In CP-071-2546-00110, issued to Kobelco on December 10, 1993, the Metal Powder Classifying Facility is listed as including conveying, sieving, sizing, storage, and blending with a 95% efficient baghouse dust collection system, BS-1. Operation condition no. 9 states that PM and PM10 emissions from the Metal Powder Classifying Facility shall be controlled by a 99% baghouse dust collection system, BS-1. This indicates that all of these operations were required to be controlled by baghouse BS-1. An inspection of the source on April 25, 2002 revealed that controls were never installed for any part of the Metal Powder Classifying Facility. The source has since installed baghouse BS-1 which controls the Metal Powder Classifying Facility, which includes one (1) screen (which is used to perform product sieving and sizing) and one (1) conveyor. Since storage occurs in the surge hoppers controlled by baghouse dust collectors BS-2a and BS-2b, and blending occurs in the blender packaging facility controlled by baghouse dust collectors BS-3a, BS-3b, BS-3c, and BS-3d, IDEM has determined that control of the conveyor and screen for sieving and sizing is sufficient to maintain PM and PM10 emissions from the Metal Powder Classifying Facility at or below the applicable emission limits to render 326 IAC 2-2 (PSD) not applicable. Therefore, condition D.4.4 has been revised to read as follows:

D.4.4 Particulate Matter (PM)

Pursuant to CP-071-2546-00110, issued on December 10, 1993, and in order to comply with Condition D.4.1(b), the baghouse dust collection systems for PM control shall be in operation and control emissions from the ~~conveying, product sieving and sizing, storage, and blending~~ **Metal Powder Classifying Facility**, product surge hoppers, and all **blender** packaging systems at all times that these activities are in operation.

**Comment #17**

Condition D.4.5 - Visible Emissions Notations - This condition should be deleted because it is an excessive burden based on the minimal amount of emissions from these units. In addition, taking visible emission notations at the "exhaust points" is impossible and not useful. The exhaust points are inside a building and not easily visible from the floor and trying to look at indoor exhaust points serves no environmental purpose, but instead, merely imposes an unjustifiable burden. Accordingly, Condition D.4.5 should be deleted as follows:

~~D.4.5 Visible Emissions Notations~~

~~(a) Visible emission notations of the exhaust points of the seven (7) baghouse dust collection systems (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d) used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~

~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~

~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~

~~(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

**Response #17**

Condition D.4.5 requires visible emission notations to be performed at the exhaust points of each of the seven baghouse dust collectors once per shift when exhausting directly to the atmosphere. If the baghouses do not exhaust directly to the atmosphere, the visible emission notations would not be required.

Compliance monitoring, including visible emission notations, parametric monitoring, baghouse inspections, and baghouse failure detection, is required for the seven baghouses because the PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for PM and PM10. Since the baghouses are required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance.

**Comment #18**

Condition D.4.6 - Parametric Monitoring - This condition should be deleted as follows because the baghouses should not be included in the permit, and the burden for performing this monitoring is unjustifiable.

~~D.4.6 Parametric Monitoring~~

~~The Permittee shall record the total static pressure drop across each of the baghouse dust collectors used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems, at least once per shift when the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems are in operation when venting to the atmosphere. When for any one reading,~~

~~the pressure drop across the baghouse dust collector is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

~~The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.~~

**Response #18**

Compliance monitoring, including parametric monitoring, baghouse inspections, and baghouse failure detection, is required for the seven baghouses because the PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. Since the baghouses are required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance.

**Comment #19**

Condition D.4.7 - Baghouse Inspections - This condition should be deleted as follows because the baghouses should not be included in the permit, and the burden for performing these inspections is unjustifiable.

~~D.4.7 Baghouse Inspections~~

~~An inspection shall be performed each calendar quarter of all bags controlling the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.~~

**Response #19**

Compliance monitoring, including parametric monitoring, baghouse inspections, and baghouse failure detection, is required for the seven baghouses because the PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. Since the baghouses are required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance.

**Comment #20**

Condition D.4.8 - Broken or Failed Bag Detection - This condition should be deleted as follows because the baghouses should not be included in the permit, and the burden for performing these inspections is unjustifiable.

~~D.4.8 Broken or Failed Bag Detection~~

~~In the event that bag failure has been observed:~~

~~(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

~~(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

**Response #20**

Compliance monitoring, including parametric monitoring, baghouse inspections, and baghouse failure detection, is required for the seven baghouses because the PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. Since the baghouses are required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance. See item 5 of the changes made by the OAQ below for revisions to the wording of this condition.

**Comment #21**

Condition D.4.9 - Record Keeping Requirements - These terms should be modified in the same manner as the underlying terms, including that natural gas should be on a monthly basis, and subsections (b), (c), (d), and (e) should be deleted as follows:

D.4.9 Record Keeping Requirements

(a) To document compliance with Condition D.4.1(a), the Permittee shall record the amount of natural gas combusted per ~~day~~ **month**.

~~(b) To document compliance with Condition D.4.5, the Permittee shall maintain records of visible emission notations of the exhaust points of the seven (7) baghouse dust collection systems (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d) once per shift.~~

~~(c) To document compliance with Condition D.4.6, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.~~

~~(d) To document compliance with Condition D.4.7, the Permittee shall maintain records of the~~

~~results of the inspections required under Condition D.4.7 and the dates the vents are redirected.~~

~~(e) To document compliance with Condition D.4.2, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.~~

~~(f)~~**(b)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Response #21**

Compliance monitoring, including visible emission notations, parametric monitoring, baghouse inspections, and baghouse failure detection, is required for the seven baghouses because the PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. Since the baghouses are required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance. Therefore, paragraphs (b) through (e) will remain unchanged in the permit.

As stated in response #13 above, since CP-071-2546-00110, issued to this source on December 10, 1993, only required the source to report monthly usage with the average daily usage per month, the record keeping requirement for the natural gas usage shall be changed to monthly with a record of the average daily usage per month. Condition D.4.9(a) is revised to read as follows:

D.4.9 Record Keeping Requirements

(a) To document compliance with Condition D.4.1(a), the Permittee shall record the amount of natural gas combusted per ~~day~~ **month, including the average daily natural gas usage in each month**.

**Comment #22**

Conditions D.6.2 and D.6.3 - Volatile Organic Compounds (VOC) - These conditions should be deleted as follows because there are no cold cleaner operations or degreasers at the plant.

~~D.6.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]~~

~~Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:~~

~~(a) Equip the cleaner with a cover;~~

~~(b) Equip the cleaner with a facility for draining cleaned parts;~~

~~(c) Close the degreaser cover whenever parts are not being handled in the cleaner;~~

~~(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;~~

~~(e) Provide a permanent, conspicuous label summarizing the operation requirements;~~

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.6.3 Volatile Organic Compounds (VOC) [326 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9$^{o}$C) (one hundred twenty degrees Fahrenheit (120$^{o}$F)):

(A) A freeboard that attains a freeboard ratio of seventy five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than,

water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**Response #22**

As noted in response #4 above, reference to the degreasers and conditions D.6.2 and D.6.3 have been deleted from the permit.

**Comment #23**

Technical Support Document, page 6 of 29 - Existing Approvals - Kobelco objects to the following "response" to Kobelco's request for permit modification to eliminate the requirement to operate the baghouses. As an initial matter, it is not appropriate to respond to the permit modification request by referencing it in a technical support document, and Kobelco objects to IDEM's conclusory determination that it has "determined that the calculations alone are not sufficient to prove that 99.999% of the emissions are captured within the building." Kobelco believes that these baghouses should be removed from the permit, on the basis of its May 22, 2002 submission and disagrees with their finding, and asks that it be removed from the permit and asks that IDEM render an official determination.

Additional Note: On May 22, 2002, IDEM, OAQ received an application (No. 071-15652-00016) for an approval to remove the requirements to operate the baghouses identified as BS-1, BS-2 (now BS-2a and BS-2b), and BS-3 (now BS-3a, BS-3b, BS-3c, and BS-3d) to control particulate emissions from the Metal Powder Classifying Facility, the product surge hoppers and the packaging operations. These requirements were included in CP-071-2546-00110 (PSD Permit), issued December 10, 1993. Kobelco Metal Powder of America, Inc. stated in the application that without consideration of the baghouses, the building itself provides a control efficiency of 99.999% due to the heaviness of the steel particles. The application included calculations which concluded that 99.999% of the weight of the particles released to the air inside the building will settle out within the building.

IDEM, OAQ has determined that the calculations alone are not sufficient to prove that 99.999% of the emissions are captured within the building. Kobelco would have to also do testing to prove that emissions were captured in the building at such a high rate. They would likely have to test as if the building were a total enclosure. Kobelco stated that they would not be able to do this, therefore,

~~the requirements to operate these baghouses will remain in the Title V permit.~~

**Response #23**

The request submitted by Kobelco for a permit modification to eliminate the requirement to operate the baghouses, was originally combined with the review of the Title V permit so that the determination included in the Technical Support Document (TSD) is part of the official Title V permit and serves as the OAQ's official determination. However, at Kobelco's request, a separate determination (Tracking No. 071-15652-00016) will be issued by IDEM, OAQ. IDEM has denied Kobelco's request to remove the requirement to operate the baghouses.

As explained in the Technical Support Document (TSD), the request was denied by IDEM on the basis of insufficient evidence that the building provides a 99.999% control efficiency and that the baghouses are not required to control particulate emissions. Without testing, these assumptions can not be accepted in order to justify removing controls that were previously determined to be necessary in order to comply with the PM and PM10 limits to render 326 IAC 2-2 (PSD) not applicable in CP-071-2546-00110, issued on December 10, 1993.

**Comment #24**

Technical Support Document, page 6 of 29 - Enforcement Issue - Kobelco does not admit that it ever violated the referenced requirements, and notes that the Agreed Order that it signed did not include any admission of violation. Kobelco objects to the wording in this statement and also notes that this issue is fully resolved.

**Response #24**

Pursuant to IC 13-30-3-3, entry into the terms of an Agreed Order does not constitute an admission of any violation contained in the Agreed Order. IDEM's Office of Enforcement has stated that the Agreed Order, Case No. 4189, amended to Case No. 3148, has never been signed by Kobelco and is still in the middle of negotiations. The Office of Enforcement stands behind every violation citation it made in the Agreed Order, Notice of Violation (NOV) and the amended NOV, effective May 21, 2003. Therefore, these issues have NOT been resolved to the satisfaction of the Office of Enforcement. No changes have been made regarding the Enforcement Issues as a result of this comment.

**Comment #25**

Technical Support Document, page 24 of 29 - Compliance Requirements - Kobelco objects to any testing requirement for BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d, and asks IDEM to identify what criteria it identified that requires testing of these units.

**Response #25**

As stated on page 20 of the Technical Support Document, under the Testing Requirements section, PM and PM10 testing is required on all seven (7) baghouse dust collectors (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d) to demonstrate compliance with the emission limits to render 326 IAC 2-2 (PSD) not applicable and to establish the compliance monitoring parameters that will be used to demonstrate compliance in the future. Since it is IDEM's determination that the control devices are required to comply with the minor PM and PM10 emission limits to render 326 IAC 2-2 (PSD) not applicable, it is IDEM's policy to require testing for such units.

**Comment #26**

Technical Support Document - General - Kobelco asks that all changes made in response to these comments be incorporated throughout the Technical Support Document.

**Response #26**

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and are part of the record regarding this permit decision. Therefore, all revisions to information in the TSD necessary to reflect changes made as a result of comments 1 through 25 above are documented in this TSD Addendum.

On June 27, 2003, Michael Barsottelli of Praxair, Inc. submitted comments on the proposed permit. A summary of the comments and responses is as follows:

**Comment #1**

Praxair requests that item A.2(b) be deleted from the proposed permit. Item A.2(b) incorporates the Praxair hydrogen plant into Kobelco's Title V Part 70 operating permit. However, as documented in the attachments to this letter, the Praxair hydrogen plant is a separate “Source” that cannot and should not be associated with the Kobelco facility from an air permitting standpoint.

Praxair included an excerpt from a registration (No. 183-11911-00032) issued to another Praxair facility in Columbia City, Indiana, issued on June 22, 2000. On page 3 under Source Definition, it is concluded that the Praxair plant at the Steel Dynamics, Inc. (SDI) site is a separate source. This conclusion is completely applicable to the Praxair plant at Kobelco and the request to delete item A.2(b).

**Response #1**

As explained in detail in response #2 above to the comments from Kobelco on the proposed permit, since the two plants are on contiguous property, the two plants are considered under common control because they satisfy the but/for test for common control, and they belong to the same industrial grouping, because the Praxair plant is a support facility for the Kobelco plant, OAQ has determined that the two plants are one major source. See response #2 above for revisions to the permit to clarify this determination.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

1. The OAQ has decided to move the provision that is required by 326 IAC 2-7-5(6) from condition B.8 to the title page of the permit. The following paragraph has been added to the title page of the permit:

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

Condition B.8 has been deleted from the permit and the remaining section B conditions have been re-numbered accordingly.

~~B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]~~

~~(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:~~

~~(1) Enforcement action;~~

~~(2) Permit termination, revocation and reissuance, or modification; or~~

~~(3) Denial of a permit renewal application.~~

~~(b) Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.~~

~~(c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.~~

~~(d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.~~

2. The second paragraph of the Title page of the permit, now the third paragraph, has been revised as follows:

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. **This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.**

3. On March 3, 2003, U.S.EPA published a notice for "Conditional Approval of Implementation Plan: Indiana" in the Federal Register / Vol. 68, No.41 at pages 9892 through 9895. This notice grants conditional approval to the PSD State Implementation Plan (SIP) under provisions of 40 CFR §51.166 and 40 CFR §52.770 while superceding the delegated PSD SIP authority under 40 CFR §52.793. The effective date for these provisions is April 2, 2003. Therefore, the PSD permits will be issued under the authority of 326 IAC 2-2 and will no longer be issued under the provision of 40 CFR 52.21 and 40 CFR 124. Because of this, conditions D.2.1, D.3.1, and D.6.1 which only contain limits that render the requirements of 326 IAC 2-2 (PSD) not applicable, have been further revised based on the PSD SIP approval status (where language deleted is shown with strikeout):

D.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] ~~[40 CFR 52.21]~~

Pursuant to CP-071-2546-00110, issued on December 10, 1993, the following shall apply to the drying rotary kiln (DRK) in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions:

(a) Process emissions from the DRK shall be exhausted through the 95% efficient wet scrubber exhausting from stack S-2;
(b) Fugitive emissions from the DRK shall be contained within the building;
(c) Visible emissions from any building opening as a result of the DRK shall be limited to 6% opacity in any one (1) six (6) minute averaging period.
(d) Particulate matter (PM) and PM10 emissions from the drying process shall each not exceed 0.3 pounds per hour;
(e) Pursuant to 326 IAC 2-2 and 6-5, the dryer air pollution control equipment operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

D.3.1 Prevention of Significant Deterioration [326 IAC 2-2] ~~[40 CFR 52.21]~~

Pursuant to CP-071-2546-00110, issued on December 10, 1993, in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions:

(a) the boiler (B1) shall burn only natural gas and shall be limited to 12.55 MMBtu per hour heat input. Combustion gases shall be vented to the atmosphere through stack S-3.
(b) PM and PM10 emissions from the boiler (B1) shall each not exceed 0.1 pound per hour.

D.6.1 Prevention of Significant Deterioration [326 IAC 2-2] ~~[40 CFR 52.21]~~

Pursuant to CP-071-2546-00110, issued on December 10, 1993, in order to render the requirements of 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions, the following shall apply:

(a) the ladle preheat unit, the two (2) tundish preheat units, and the flame suppression atomizer shall each burn only natural gas and shall each be limited to 2.33, 1.18, 1.18, and 1.45 MMBtu per hour heat input, respectively.
(b) Total PM and PM10 emissions from the ladle preheat unit and the two (2) tundish preheat units shall each not exceed 0.05 pound per hour.
(c) PM and PM10 emissions from the flame suppression atomizer shall each not exceed 0.01 pound per hour.

Since conditions D.1.3 and D.4.1 contain CO emission limits that were established pursuant to 326 IAC 2-2-3(2) BACT, prior to April 2, 2003, the rule cite for 40 CFR 52.21 has not been deleted.

3. A requirement has been added to condition D.5.5 to require records of inspections prescribed by the Preventive Maintenance Plan to be maintained. Also, language was added to this condition to clarify that the Permittee has 30 days to demonstrate compliance with the limit.

D.5.5 Record Keeping Requirements

(a) To document compliance with Condition D.5.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the toluene consumption limit and/or the HAP and VOC emission limits established in Condition D.5.1. **Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.**

(1) The amount and HAP/VOC content of the solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(2) The total toluene solvent input and total toluene solvent recovered for each month; and

(3) The weight of HAPs and VOCs emitted for each compliance period.

**(b) To document compliance with Condition D.5.3, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.**

~~(b)~~**(c)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

4. The notification requirement in paragraph (b)(3) of condition C.17, Compliance Response Plan - Preparation, Implementation, Records, and Reports, has been modified to apply only to situations where the emissions unit will continue to operate for an extended time while the compliance monitoring parameter is out of range. It is intended to provide the OAQ an opportunity to assess the situation and determine whether any additional actions are necessary to demonstrate compliance with applicable requirements. The paragraph is revised as follows:

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, **and it will be 10 days or more until the unit or device will be shut down,** ~~the IDEM, OAQ shall be notified~~ **then the permittee shall** promptly **notify the IDEM, OAQ** of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

5. The OAQ has decided that rather than require an emission unit to automatically shutdown when a broken bag occurs that causes visible emissions, the OAQ would instead require the Permittee to notify the OAQ if they determine the broken bag will not be fixed within 10 days. The notification would tell the OAQ when they expect to fix the problems. Once OAQ receives the notification, a decision can be made whether to require the source to do a stack test. Therefore, conditions D.1.12 and D.4.8 have been revised as follows:

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. ~~Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions).~~ Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit. **If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.**

(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.4.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. ~~Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions).~~ Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of

discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit. **If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.**

(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

6. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, is considered a deviation from the permit, not a violation of the permit. Therefore, conditions D.1.10, D.1.12(a), D.2.4(e), D.2.5, D.4.5(e), D.4.6, and D.4.8(a) have been revised as follows:

D.1.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the electric arc furnace, at least once per shift when the electric arc furnace is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.4 Visible Emissions Notations

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.

D.2.5 Parametric Monitoring

The Permittee shall record the total static pressure drop and flow rate of the scrubber used in conjunction with the drying rotary kiln (DRK), at least once per shift when the DRK is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the scrubber is outside the normal range of 17.0 and 23.0 inches of water or a range established during the latest stack test, or the flow rate of the scrubber is below a minimum of 30 gallons per minute, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range or a flow rate that is below the above mentioned flow rate is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.

The instruments used for determining the pressure and flow rate shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.5 Visible Emissions Notations

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.

D.4.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the baghouse dust collectors used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems, at least once per shift when the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse dust collector is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

# Indiana Department of Environmental Management
# Office of Air Quality

## Technical Support Document (TSD) for a Part 70 Operating Permit

**Source Background and Description**

| | |
|---|---|
| **Source Name:** | **Kobelco Metal Powder of America, Inc.** |
| **Source Location:** | **1625 Bateman Drive, Seymour, Indiana 47274** |
| **County:** | **Jackson** |
| **SIC Code (NAICS Code):** | **3311A** |
| **Operation Permit No.:** | **T071-7315-00016** |
| **Permit Reviewer:** | **Trish Earls/EVP** |

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Kobelco Metal Powder of America, Inc. relating to the operation of a metal powder manufacturing operation.

**Source Definition**

This source consists of the metal powder manufacturing operation owned by Kobelco Metal Powder of America, Inc. and a hydrogen plant owned by Praxair, an on-site contractor.

(a) Kobelco Metal Powder of America, Inc., the primary operation, is located at 1625 Bateman Drive, Seymour, Indiana 47274; and

(b) Praxair's hydrogen plant, the supporting operation, is located at 1625 Bateman Drive, Seymour, Indiana 47274.

Since the hydrogen plant owned by Praxair provides all of its output to the metal powder manufacturing operation at Kobelco's plant, and its output is an integral part of the operation at Kobelco, IDEM has determined that Kobelco Metal Powder of America, Inc. and the hydrogen plant owned by Praxair are under the common control of Kobelco Metal Powder of America, Inc. Pursuant to 326 IAC 2-7-1(22), the hydrogen plant would be considered a support facility since both plants are under common control, are located on the same property, and the hydrogen plant provides greater than 50% of its output to Kobelco. These two plants are considered one source due to contractual control. Therefore, the term "source" in the Part 70 documents refers to both Kobelco Metal Powder of America, Inc. and the hydrogen plant owned by Praxair as one source.

One combined Part 70 permit will be issued to Kobelco Metal Powder of America, Inc. and Praxair. The new plant ID for the combined source is 071-00016.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

(a) one (1) electric arc furnace (EAF), constructed in 1989, producing a maximum of 10.0 tons of carbon grade steel per hour, equipped with one (1) natural gas-fired oxy-fuel burner, rated at 9.5 million (MM) British thermal units (Btu) per hour, added in 2000, and one (1) Coherent Jet injection lance and natural gas-fired burner configuration, rated at 9.5 MMBtu per hour, not yet installed, with a doghouse evacuation system enclosure ducted to a baghouse for particulate matter control, exhausting through one (1) stack (S-6);

(b) one (1) drying rotary kiln (DRK), constructed in 1989, drying a maximum of 15 tons of wet powdered steel per hour, with a wet scrubber for particulate matter control, exhausting through one (1) stack (S-2);

(c) one (1) natural gas fired boiler (B1), constructed in 1989, rated at 12.55 million (MM) British thermal units (Btu) per hour, providing steam to the drying rotary kiln, exhausting through one (1) stack (S-3);

(d) one (1) natural gas fired reduction/annealing furnace (RF-1), constructed in 1989, equipped with one (1) natural gas-fired burner that was added in 2000, rated at 18.0 MMBtu per hour, processing a maximum of 6.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-4);

(e) one (1) natural gas fired reduction/annealing furnace (RF-2), constructed in 1995, equipped with one (1) natural gas-fired burner that was added in 2000, rated at 18.0 MMBtu per hour, processing a maximum of 5.0 tons of semi-finished steel powder per hour, exhausting through one (1) stack (S-5);

(f) Metal Powder Classifying Facility including the following:

(1) Conveying, product sieving and sizing, storage, and blending all controlled by one (1) baghouse dust collection system (BS-1);

(g) Pulverizing, Feather Mills, Classifying, Blending and Packaging Facility including the following:

(1) Pulverizing surge hoppers for RF-1 and RF-2, controlled by two (2) baghouse dust collectors (BS-2a and BS-2b);
(2) Packaging systems controlled by four (4) baghouse dust collectors (BS-3a, BS-3b, BS-3c, and BS-3d);

(h) one (1) Premix line, constructed in 2001, consisting of the following equipment:

(1) one (1) blender, identified as BL-1, with a maximum production capacity of 5 tons of product per batch (or 6,666 pounds of product per hour), with a process bag filter (BF-1) used to insure proper condenser operation, and a toluene condenser (HX-1), vacuum pump (Vacuum Pump-4), and chiller unit (CH-1) with pump (Pump-5) to recover toluene solvent, exhausting through one (1) stack (ID No. SS-1);
(2) one (1) 245 gallon toluene main storage tank, identified as T-1, with one (1) pump (Pump-1);
(3) one (1) 245 gallon toluene and binder storage tank, identified as T-2, with one (1) pump (Pump-2);
(4) one (1) 245 gallon condensate return tank, identified as T-3, with one (1) pump (Pump-3);
(5) one (1) 100 gallon mixing tank, identified as T-4;

(6) one (1) 80 gallon charging tank, identified as T-5;
(7) one (1) 115 gallon toluene condensate tank, identified as T-6, with one (1) pump (Pump-6); and
(8) two (2) area bag filters (BF-2a and BF-2b) for industrial hygiene purposes.

(i) one (1) base metal powder and additive process for the new Premix line blender, constructed in 2001, consisting of the following:

(1) one (1) bulk pack lift conveyor (CL-1);
(2) one (1) 5 ton base powder charging hopper (H-1); and
(3) one (1) base powder lift conveyor (CL-2).

(j) one (1) laboratory scale pilot blender line (LSP-1), constructed in 2001, consisting of the following equipment:

(1) one (1) 100 gallon binder preparation tank, identified as T-7;
(2) one (1) 10 gallon charging tank, identified as T-8;
(3) one (1) blender, identified as BL-2, with a maximum production capacity of 500 pounds of product per batch (or 333.3 pounds of product per hour), with a process dust collector (BF-3) to insure proper condenser operation, and a toluene condenser (HX-2), vacuum pump (Vacuum Pump-2), and chiller unit (CH-2) with pump (Pump-1) to recover toluene solvent; and
(4) one (1) 20 gallon condensate tank, identified as T-9.

**Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

**Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including the following:
(1) one (1) 2.33 MMBtu per hour ladle preheat unit;
(2) two (2) 1.18 MMBtu per hour tundish preheat units; and
(3) one (1) 1.45 MMBtu per hour flame suppression atomizer.

(b) Propane or liquified petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.

(c) The following VOC and HAP storage containers:
(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;
(2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(d) Refractory storage not requiring air pollution control equipment.

(e) Equipment used exclusively for filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.

(f) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, including one (1) small cold cleaner degreaser used for maintenance purposes.

(g) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(h) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.

(i) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(j) Heat exchanger cleaning and repair.

(k) Paved and unpaved roads and parking lots with public access.

(l) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower.

(m) Filter or coalescer media changeout.

(n) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(o) Farm operations.

(p) Activities with particulate matter emissions equal to or less than 5 pounds per hour or 25 pounds per day:
(1) Ladle to tundish teeming.
(2) Fugitive emissions from material handling.
(3) Fugitive emissions from slag handling in the melt shop building.

(q) A hydrogen plant (Plant 2) with $NO_X$ emissions less than 5 pounds per hour or 25 pounds per day. (Note: This hydrogen plant is owned and operated by Praxair, an on-site contractor, who leases the property on which the hydrogen plant is located from Kobelco Metal Powder of America, Inc.)

(r) one (1) auxiliary spare 22 ton capacity blender (BL-3) for the old premix lines (insignificant activities). This blender is used only as a back-up blender for the existing line and does not increase the production capacity of the old premix lines.

**Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

(a) Construction Permit, PC (36) 1685, issued June 13, 1988;

(b) Operation Permit, 36-02-93-0110, issued January 25, 1989;

(c) Registration CP-071-2513-00016, issued June 1, 1992;

(d) CP-071-2546-00110 (PSD Permit), issued December 10, 1993;

(e) Amendment to CP-071-2546, issued May 23, 1995;

(f) Significant Source Modification No. 071-12450-00016, issued August 11, 2000;

(g) Minor Source Modification No. 071-12222-00016, issued August 31, 2000; and

(h) Minor Source Modification No. 071-14702-00016, issued September 14, 2001.

All conditions from previous approvals were incorporated into this Part 70 permit except the following conditions, which have either been removed or revised:

(a) CP-071-2546-00110 (PSD Permit), issued December 10, 1993.

The second part of Condition 5: Particulate matter from the combustion of natural gas shall not exceed 0.007 lb/hr.

The second part of Condition 6: Particulate matter from the combustion of natural gas shall not exceed 0.004 lb/hr each, for a total of 0.008 lb/hr.

The second part of Condition 7: Particulate matter from the combustion of natural gas shall not exceed 0.005 lb/hr.

Reason not incorporated: These conditions established PM limits for the 2.33 MMBtu per hour ladle preheat unit, the two (2) 1.18 MMBtu per hour tundish preheat units, and the 1.45 MMBtu per hour flame suppression atomizer, respectively, based on AIRS emission factors. Potential emissions from these units, which are insignificant activities, were re-calculated using the more recent AP-42 emission factors for natural gas combustion. Therefore, instead of having an actual emission limit, these combustion units will be required to combust natural gas only and will be limited to their respective maximum heat input capacities was stated in the first part of conditions 5, 6, and 7 of the PSD permit.

(b) CP-071-2546-00110 (PSD Permit), issued December 10, 1993.

Condition 10b: CO emissions shall not exceed 35.0 lb/MMscf of natural gas burned and 0.7 pounds per hour (3 tons/year).

Condition 11b: CO emissions shall not exceed 20 lb/MMscf of natural gas burned and 0.2 pounds per hour (0.8 tons/year).

Reason not incorporated: These conditions were based on the assumption that CO emissions from each of the reduction/annealing furnaces were generated by natural gas combustion only. Stack tests performed on the furnaces on June 30, 1998, showed that potential CO emissions from these furnaces were much higher because additional CO emissions are generated from the decarburization of the metal powder in the furnaces. A Significant Source Modification No. 071-12450-00016 was issued on August 11, 2000 which revised the CO emission limits for RF-1 and RF-2 under the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 40 CFR 52.21, and 40 CFR 52.124, to include these additional CO emissions from decarburization. The revised limit for each furnace is 1.0 pound of CO per ton of steel powder processed.

(c) CP-071-2546-00110 (PSD Permit), issued December 10, 1993.

The second part of Condition 8: Particulate matter from the combustion of natural gas shall not exceed 0.04 lb/hr.

Reason not incorporated: This condition established a PM limit for the 12.55 MMBtu per hour boiler, which provides steam to the drying rotary kiln, based on an AIRS emission factor. Potential emissions from this unit, were re-calculated using the more recent AP-42 emission factors for natural gas combustion. These conditions were not incorporated into

the Part 70 permit because these limits are not based on the most recent emission factors and the limits are not required to meet any federal or state regulations. Therefore, instead of having an actual emission limit, this combustion unit will be required to combust natural gas only and will be limited to its maximum heat input capacity as stated in the first part of condition 8 of the PSD permit.

Condition 10a: That only natural gas shall be burned and limited to 14.55 MMBtu/hr heat input.

Condition 11a: That only natural gas shall be burned and limited to 9.0 MMBtu/hr heat input.

Reason not incorporated: These conditions were revised to reflect the current heat input ratings of each of the reduction/annealing furnaces (RF-1 and RF-2) of 18.0 MMBtu per hour as permitted under Minor Source Modification No. 071-12222-00016, issued on August 31, 2000.

Condition 10c: Particulate matter from the combustion of natural gas shall not exceed 0.04 lb/hr.

Condition 11c: Particulate matter from the combustion of natural gas shall not exceed 0.03 lb/hr.

Reason not incorporated: These conditions established PM limits for the 14.55 MMBtu per hour and the 13.096 MMBtu per hour reduction/annealing furnaces (RF-1 and RF-2) based on AIRS emission factors. These conditions were not incorporated into the Part 70 permit because these limits are not based on the most recent emission factors and the limits are not required to meet any federal or state regulations. Also, the heat input rating for each of these furnaces was increased to 18.0 MMBtu per hour as permitted in Minor Source Modification No. 071-12222-00016, issued on August 31, 2000.

Additional Note: On May 22, 2002, IDEM, OAQ received an application (No. 071-15652-00016) for an approval to remove the requirements to operate the baghouses identified as BS-1, BS-2 (now BS-2a and BS-2b), and BS-3 (now BS-3a, BS-3b, BS-3c, and BS-3d) to control particulate emissions from the Metal Powder Classifying Facility, the product surge hoppers and the packaging operations. These requirements were included in CP-071-2546-00110 (PSD Permit), issued December 10, 1993. Kobelco Metal Powder of America, Inc. stated in the application that without consideration of the baghouses, the building itself provides a control efficiency of 99.999% due to the heaviness of the steel particles. The application included calculations which concluded that 99.999% of the weight of the particles released to the air inside the building will settle out within the building.

IDEM, OAQ has determined that the calculations alone are not sufficient to prove that 99.999% of the emissions are captured within the building. Kobelco would have to also do testing to prove that emissions were captured in the building at such a high rate. They would likely have to test as if the building were a total enclosure. Kobelco stated that they would not be able to do this, therefore, the requirements to operate these baghouses will remain in the Title V permit.

**Enforcement Issue**

The source had the following enforcement actions pending:

(1) An Agreed Order, effective July 20, 1999 was issued to the source as a result of an inspection of the source on February 9, 1998. The source was found to be in violation of

the following:

40 CFR 60.273a(c), 40 CFR 60.274a(b), 40 CFR 276a(b), 40 CFR 60.8(a) incorporated in 326 IAC 3-2 and 326 IAC 12-1, Operation Condition 19 of CP 071-2546, Operation Condition 4f of CP 071-2546, 326 IAC 2-2-3, Operation Condition 24 of CP 071-2546, and 326 IAC 2-1-3(a) and 326 IAC 2-7-3.

The source must comply with the requirements of the Agreed Order. Kobelco Metal Powder of America, Inc. has stated that they are now in compliance with the above rules and operation conditions which they had previously violated and will remain in compliance.

(2) A Notice of Violation (NOV), effective February 21, 2002 was issued to this source as a result of an inspection of the source on November 14, 2001. The inspection indicated that the source was in violation of the following:

Pursuant to 326 IAC 12, incorporating by reference 40 CFR 60.272a(a)(3), and Minor Source Modification number 071-12222-00016 condition D.1.1, no owner or operator of an EAF shall cause to be discharged into the atmosphere from the EAF any gases, which exit from the shop due solely to the operation of the EAF, exhibiting six percent (6%) opacity or greater.

The EAF at this facility, on November 14, 2001, allowed a discharge into the atmosphere from the EAF gases, which exited from the roof monitor due solely to the operation of the EAF and exhibited opacity in excess of 6%, violations of 326 IAC 12, incorporating by reference 40 CFR 60.272a(a)(3), and Minor Source Modification number 071-12222-00016 condition D.1.1.

On July 29, 2002, IDEM's Office of Enforcement received a status report from Kobelco Metal Powder of America, Inc. which included several items proposed to settle the NOV resulting from a June 19, 2002 meeting between the source and IDEM staff. IDEM is taking appropriate action on this matter.

(3) An inspection of this source on April 25, 2002, revealed that the baghouse dust collection system for control of PM and PM10 emissions from the conveying, product sieving and sizing, storage, and blending, identified as BS-1, was not installed as required in CP-071-2546-00110 (PSD Permit). Another inspection was performed in 2003 and the inspector confirmed that the baghouse dust collection system controlling emissions from the conveying, product sieving and sizing, storage, and blending has been installed. IDEM is taking appropriate action on this matter.

**Recommendation**

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on December 2, 1996. Additional information was received on March 2, 1998, February 3, 1999, August 26, 2002, and January 16, 2003.

A notice of completeness letter was mailed to the source on December 9, 1996.

**Emission Calculations**

See Appendix A of this document for detailed emissions calculations (8 pages).

**Potential To Emit**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | greater than 250 |
| PM-10 | greater than 250 |
| $SO_2$ | less than 100 |
| VOC | less than 100 |
| CO | greater than 250 |
| $NO_x$ | less than 100 |

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

| HAP's | Potential To Emit (tons/year) |
|---|---|
| Lead | less than 10 |
| Hexane | less than 10 |
| Toluene | less than 10 |
| TOTAL | less than 25 |

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10 and CO are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) Fugitive Emissions
Since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

**Actual Emissions**

The following table shows the actual emissions from the source. This information reflects the 2001 OAQ emission data.

| Pollutant | Actual Emissions (tons/year) |
|---|---|
| PM | N/A |
| PM-10 | 2.18 |
| $SO_2$ | 1.24 |
| VOC | 3.89 |
| CO | 144.62 |
| $NO_x$ | 13.71 |
| HAP (lead) | 0.01 |

**Potential to Emit After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 operating permit.

| | Potential to Emit (tons/year) |
|---|---|

| Process/facility | PM | PM-10 | $SO_2$ | VOC | CO | $NO_X$ | HAPs |
|---|---|---|---|---|---|---|---|
| Electric Arc Furnace (EAF)(1) | 10.07 | 7.66 | 2.19 | 5.69 | 279.01 | 4.38 | 0.04 |
| Oxy-fuel and Coherent Jet Burners | 0.16 | 0.62 | 0.05 | 0.45 | 0.00 | 0.00 | 0.02 |
| Drying Rotary Kiln (DRK)(2) | 1.31 | 1.31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Boiler (B1) | 0.10 | 0.41 | 0.03 | 0.30 | 4.53 | 5.51 | 0.00 |
| RF-1(3) | 0.15 | 0.59 | 0.05 | 0.43 | 26.28 | 7.73 | 0.00 |
| RF-2(3) | 0.15 | 0.59 | 0.05 | 0.43 | 21.90 | 12.20 | 0.00 |
| Metal Powder Classifying Facility | 1.20 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Product surge hoppers | 0.94 | 0.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Packaging system | 0.94 | 0.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Premix Line and Laboratory Scale Pilot Blender | <0.1 | <0.1 | 0.0 | 9.64 | 0.0 | 0.0 | 9.64 |
| Insignificant Activities | 3.17 | 1.60 | 0.02 | 0.27 | 2.87 | 3.41 | 0.00 |
| Total Emissions | 18.19 | 15.86 | 2.39 | 17.21 | 334.59 | 33.23 | 9.70 |

(1) Allowable PM emissions for the EAF represent allowable emissions pursuant to CP-071-2546-00110, issued December 10, 1993. PM10 emissions are based on PM10 to PM ratio of 0.76 lbs PM10/lb PM from USEPA's AP-42, section 12.5, Table 12.5-2.

(2) Allowable PM emissions for the DRK represent allowable emissions pursuant to CP-071-2546-00110, issued December 10, 1993. PM10 emissions are assumed equal to PM emissions.

(3) The CO emissions from RF-1 and RF-2 reflect the revised CO emission limits pursuant to 326 IAC 2-2 (PSD), 40 CFR 52.21, and 40 CFR 52.124.

**County Attainment Status**

The source is located in Jackson County.

| Pollutant | Status |
|---|---|
| PM-10 | attainment |
| $SO_2$ | attainment |
| $NO_2$ | attainment |
| Ozone | attainment |
| CO | attainment |
| Lead | attainment |

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Jackson County has been designated as attainment or unclassifiable for

ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Jackson County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

**Part 70 Permit Conditions**

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

**Federal Rule Applicability**

(a) The electric arc furnace (EAF) is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.270a through 276a, Subpart AAa). Pursuant to this rule, the Permittee shall not cause to be discharged into the atmosphere from the EAF any gases which: (1) exit from a control device and contain particulate matter in excess of 0.0052 gr/dscf; (2) exit from a control device and exhibit 3 percent opacity or greater; and (3) exit from a shop and, due solely to the operations of any affected EAF(s), exhibit 6 percent opacity or greater. Also, the Permittee shall not cause to be discharged into the atmosphere from the dust handling system any gases that exhibit 10 percent opacity or greater.

(b) The 12.55 MMBtu per hour boiler (B1) for the drying rotary kiln is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc) because construction commenced on the boiler in January, 1989. This rule only applies to boilers that commenced construction after June 9, 1989.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

**State Rule Applicability - Entire Source**

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source has submitted a Preventive Maintenance Plan (PMP) on December 2, 1996. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is subject to the requirements of 326 IAC 2-2 (PSD), 40 CFR 52.21, and 40 CFR 52.124, because potential CO emissions after control are greater than 250 tons per year. Pursuant to this rule, this source was issued a PSD permit (CP-071-2546-00110) on December 10, 1993. The Part 70 operating permit will incorporate the PSD requirements pursuant to the PSD permit issued to the source, except the CO emission limits listed in Operation Conditions 10b and 11b of the PSD permit for the two (2) reduction/annealing furnaces (RF-1 and RF-2). These limits were based on the assumption that CO emissions from each of the reduction/annealing furnaces were generated by natural gas combustion only. Stack tests performed on the furnaces on June 30, 1998, showed that potential CO emissions from these furnaces were much higher because additional CO emissions are generated from the decarburization of the metal powder in the furnaces. Therefore, the CO emission limits were revised under the requirements of 326 IAC 2-2 (PSD), 40 CFR 52.21, and 40 CFR 52.124, to include these additional CO emissions from decarburization.

In the original Title V permit application, Kobelco Metal Powder of America, Inc. requested that the limit be changed to 2.8 pounds of CO per ton of steel powder processed. However, on April 28, 2000, the source submitted another application to the OAQ requesting to change the CO emission limits for the two (2) reduction/annealing furnaces from 2.8 pounds CO per ton of steel powder processed to 1.0 pound CO per ton of steel powder processed for each furnace. A Significant Source Modification No. 071-12450-00016 was issued for this change to the CO emission limits on August 11, 2000. Since the new CO emission limits that the source requested on April 28, 2000, for the two (2) reduction/annealing furnaces are more stringent than the revised limits that were originally requested in the Part 70 permit application, the original BACT analysis and ambient air quality analysis submitted with the original Part 70 permit application was used. Therefore, the revised limit for each furnace will be 1.0 pound of CO per ton of steel powder processed. At the OAQ's request, Kobelco Metal Powder of America, Inc. submitted the following in support of the revised CO emission limits:

(a) Descriptions of the requested adjustments and the reasons for the request;

(b) An Ambient Air Quality Analysis which assesses the impacts of the requested adjustments on ambient air in the vicinity of the plants and at more distant locations; and

(c) A consideration of CO control technologies as a supplement to the Best Available Control Technology (BACT) Analysis presented in the PSD Construction permit application.

A review of the submitted items listed above yielded the following conclusions:

(a) The CO emissions for each of the reduction/annealing furnaces provided in the original PSD construction permit application were based solely on the combustion of natural gas and did not account for CO formed by the release of carbon from the steel powder (decarburization) into the reducing (oxygen deficient) atmosphere of the reduction/annealing furnace. A CO emissions stack test was conducted in June, 1998. The CO emission rates measured during the test included the contributions from both the decarburization of the steel powder and the combustion of natural gas. It was determined that the CO emission rate from the decarburization of steel powder is approximately proportional to the semi-finished product input rate. The natural gas firing rate to achieve the required furnace temperature profile required for the desired annealing of the steel powder is approximately proportional to the semi-finished product weight. Consequently, the CO emission rate from natural gas combustion is approximately proportional to the semi-finished product input weight rate. Based on these proportionalities, the total CO emission rate resulting from both CO formation mechanisms (decarburization and natural gas combustion) is approximately proportional to the semi-finished product input rate. The CO emission rates measured during the stack test were converted from pounds of CO per hour to units of pounds per ton of semi-finished product input. During the stack tests, six separate stack test runs were performed (three at each furnace) with both furnaces processing the same semi-finished product and producing the same finished product. The stack tests results for both furnaces were then combined into a single six-point data set for the purpose of statistical evaluation. This yielded the revised CO emission limit of 2.8 pounds of CO per ton of semi-finished product input to the reduction/annealing process. More recent testing on these furnaces demonstrated that this limit can be reduced to 1.0 pound of CO per ton of semi-finished product input to the reduction/annealing process.

(b) The ambient air quality analysis for CO was performed by predicting the impacts of the proposed CO emission limits (at the time that the analysis was performed, this limit was 2.8 pounds of CO per ton of semi-finished steel powder processed) for the reduction/annealing furnaces, in conjunction with the estimated maximum CO emissions at other CO emission locations at the source, on ambient air concentrations of CO at off-site receptor locations using ambient air dispersion modeling. The predicted impacts from the source were then compared to Significant Impact Levels (SILs) for CO specified in 326 IAC 2-3-2(e), the Air Quality Monitoring Exemption Level specified in 326 IAC 2-2-4(b) for CO, and the National Ambient Air Quality Standards (NAAQS) for CO. Carbon monoxide was modeled using averaging periods corresponding to the NAAQS and the Indiana ambient air quality values. These averaging periods are 1-hour and 8-hour averages. The following table shows the results of the air dispersion modeling compared to the SILs, Exemption Level, and the NAAQS.

| Meteoro-logical Data Year | 8-Hour Average ug/$m^3$ | | | | | 1-Hour Average ug/$m^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1st Highest | 2nd Highest | SIL | Air Quality Monitoring Exemption Level | NAAQS | 1st Highest | 2nd Highest | SIL | NAAQS |
| 1982 | 416.88 | 289.20 | 500 | 575 | 10,000 | 625.00 | 555.22 | 2,000 | 40,000 |
| 1983 | 357.07 | 339.75 | 500 | 575 | 10,000 | 718.49 | 604.04 | 2,000 | 40,000 |
| 1984 | 436.19 | 337.26 | 500 | 575 | 10,000 | 606.13 | 569.18 | 2,000 | 40,000 |
| 1985 | 472.62 | 445.46 | 500 | 575 | 10,000 | 781.67 | 717.37 | 2,000 | 40,000 |
| 1986 | 364.40 | 304.44 | 500 | 575 | 10,000 | 571.38 | 430.62 | 2,000 | 40,000 |

The predicted impacts due to the source wide CO emissions, including the emission rates corresponding to the proposed CO emission limits for the reduction/annealing furnaces (at the time that the analysis was performed, this limit was 2.8 pounds of CO per ton of semi-finished steel powder processed), are below the SILs and the air quality monitoring exemption level. Therefore, the CO emission limits of 1.0 pound of CO per ton of semi-finished steel powder processed would also be below the SILs and the air quality monitoring exemption level.

The SILs are ambient air concentration thresholds below which the regulatory agencies consider impacts on ambient air to be insignificant. Therefore, the proposed adjustments to the CO emission limits for reduction/annealing furnaces RF-1 and RF-2 result in insignificant impacts on ambient air quality. The predicted impacts on ambient air for CO are also well below the NAAQS for the two averaging periods. Therefore, the conclusions of the ambient air quality analysis performed for the previously submitted PSD construction permit application that the impacts on ambient air quality are insignificant remain unchanged.

(c) Several considerations were made for CO control technologies as a supplement to the BACT Analysis provided in the original PSD construction permit application. As a first step, the EPA's RACT/BACT/LAER Clearinghouse (RBLC) information system database was accessed and reviewed to determine if it contained any listing for steel powder reduction/annealing furnaces and CO control. No listings were found for these types of units in any part of the country. Both of the reduction/annealing furnaces are radiant-tube, natural gas-fired, continuous roller hearth furnaces. A search was also made on the database for any listing for roller hearth furnaces and CO control. No listings were found for these types of units in any part of the country.

Next, considerations were made of available CO control technologies. The reduction/annealing furnaces are equipped with hydrogen burn-off stacks in the furnace roofs through which furnace off-gas containing hydrogen is discharged into canopy hoods which are ducted to the furnace stacks. The hydrogen burn-off stacks provide some CO control prior to the discharge of furnace off-gas to the canopy hoods. The hydrogen burn-off systems at the furnaces are designed for the combustion of hydrogen prior to the discharge of furnace off-gas into the canopy hoods to prevent combustible/explosive concentrations of hydrogen in the off-gas handling system. These systems are not specifically designed for combustion of CO although some combustion of CO occurs with the combustion of the hydrogen.

Two technologies for the control of CO from combustion sources, with potential application to steel powder reduction/annealing furnaces, are commercially available: (1) afterburners, and (2) catalytic oxidizers. Both of these technologies are post-combustion, "end-of-pipe" air pollution control technologies.

(1) Afterburners

For the effective oxidation of CO to $CO_2$, the gas stream must be held at a temperature between approximately 1,350º to 1,550ºF for a residence time between approximately 0.3 to 0.5 seconds in the presence of sufficient oxygen. Depending on the CO concentrations and oxygen concentrations, these conditions result in CO destruction efficiencies between 90 and 99 percent. The gas stream temperatures at the reduction/annealing furnaces' stacks at this source, as measured during the June 1998 stack tests, are approximately 525ºF at Stack No. 4 (RF-1) and 322ºF at Stack No. 5 (RF-2). Therefore, the exhaust gas streams at the two furnaces would require significant reheating for effective CO control by

afterburning. It is calculated that the natural gas heat input requirements for reheating the furnace off-gas streams to a temperature of 1,450ºF at the two furnaces would be approximately 13.3 MMBtu per hour at RF-1 and 25.0 MMBtu per hour at RF-2. These additional fuel requirements are well in excess of the maximum rated heat input capacities of the furnaces. In addition, increased consumption of natural gas for afterburning would result in increased NOx emissions.

A cost analysis was performed to determine the economic feasibility of installing an afterburner system on the two furnaces. The cost analysis was based on potential CO emissions of 26.3 tons per year from RF-1 and 21.9 tons per year from RF-2. These were based on the revised CO emission limit for each furnace of 1.0 pounds per ton of product input. The costs were tabulated for two types of thermal afterburner systems: without heat recovery and with 70 percent heat recovery.

The results of the cost analysis are presented below.

Evaluation

| Option | Potential Emissions (tons/yr) | Emissions Removed (tons/yr) | Control Efficiency (%) | $/ton Removed |
|---|---|---|---|---|
| RF-1 without HR | 26.28 | 23.65 | 90 | $119,860 |
| RF-1 with 70% HR | 26.28 | 23.65 | 90 | $51,078 |
| RF-2 without HR | 21.90 | 19.71 | 90 | $121,063 |
| RF-2 with 70% HR | 21.90 | 19.71 | 90 | $53,502 |

Methodology:
Emissions removed = (potential emissions from furnace) * (control efficiency)
$/ton removed = total annual cost / emissions removed

The cost breakdown is as follows:

(1) Capital Cost
- (a) Base price: purchase price, auxiliary equipment, instruments, controls, taxes and freight.
- (b) Direct installation cost: foundations/supports, erection/handling, electrical, piping, insulation, painting, site preparation and building/facility.
- (c) Indirect installation cost: engineering, supervision, construction/filed expenses, construction fee, start up, performance test, model study and contingencies.

(2) Annual Cost
- (a) Direct operating cost: operating labor (operator, supervisor), labor and material maintenance, operating materials, utilities (electricity, gas).
- (b) Indirect operating cost: overhead, property tax, insurance, administration and capital recovery cost (for 7 years life of the system at 7% interest rate).

The results of the cost analysis indicate that use of a thermal afterburner system on each furnace is economically infeasible. Therefore, considering the cost analysis, the estimated CO control efficiencies of the furnaces, and the insignificant impacts of the proposed CO emission limits on ambient air as demonstrated in the ambient air analysis presented above, installation of the afterburners at the reduction/annealing furnace are considered to be unnecessary

based on energy and environmental considerations.

(2) Catalytic Oxidation
This technology uses catalysts to lower the temperature required to oxidize CO to $CO_2$. The catalysts used in this process are highly susceptible to poisoning by metallic and other inorganic elements, all of which are present in trace quantities in the steel powder processed at the reduction/annealing furnaces. Therefore, this control technology would be technically infeasible.

In summary, based on energy and environmental considerations, installation of the two "end-of-pipe" technologies for CO control at the reduction/annealing furnaces are not considered to be BACT for these furnaces nor are such controls necessary to protect ambient air quality. Therefore, BACT for the two (2) reduction/annealing furnaces will be the limit on CO emissions of 1.0 pound of CO per ton of semi-finished product input for each of the reduction/annealing furnaces (RF-1 and RF-2).

Pursuant to 326 IAC 2-2-3(2), Best Available Control Technology (BACT), as determined in CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, the following shall apply to the EAF:

(a) The EAF shall be operated within the enclosure controlled by an 86,800 acfm doghouse evacuation system, ducted to a baghouse with an 85 feet tall dispersion stack. Pursuant to 326 IAC 2-2 and 6-5, the fugitive dust control and baghouse operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.
(b) The particulate matter (PM/PM10) from the melt shop baghouse stack (S-6) shall be limited to 0.004 grains per dry standard cubic foot (gr/dscf) and 2.3 pounds per hour (10.1 tons per year).
(c) The PM/PM10 fugitive emissions generated during furnace operations shall be captured by the doghouse hood or contained within the melt shop building. Furthermore, ladle to tundish teeming emissions (insignificant activity) shall not exceed 0.5 pounds per hour.
(d) The visible emissions from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.
(e) Except for scrap steel, slag and raw material handling and storage shall be conducted inside the melt shop building exclusively. Furthermore, slag pot and ladle slag dumping emissions (insignificant activity) shall not exceed 0.6 pounds per hour.
(f) Carbon monoxide (CO) emissions from the EAF shall be captured and exhausted from the EAF baghouse stack for proper dispersion. Total melt shop CO emissions shall be limited to 10.5 pounds of CO emitted per ton of metal product based on a twenty-four hour averaging period, 23 tons per month, and 8.5 pounds of CO emitted per ton of metal product based on a one month averaging period from the baghouse.
(g) Volatile Organic Compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content. Kobelco Metal Powder of America shall charge only clean scrap, consistent with the Scrap Management Program for Kobelco on file with IDEM. Any changes made to the Scrap Management Program shall be submitted to IDEM, OAQ thirty (30) days prior to implementing the changes.

These limits shall also satisfy the requirements of the NSPS, 40 CFR 60.272a, Subpart AAa.

Note that the PSD emission limits established in the PSD permit for the existing electric arc furnace (ID EAF) of 0.004 gr/dscf for PM and PM10 and 8.5 pounds per ton of metal product for CO, remain unchanged. The modification to the EAF as permitted in Minor Source Modification No. 071-12222-00016, issued on August 31, 2000, did not change any of the existing emission limits. However, due to the installation of the oxy-fuel burner and the Coherent Jet injection lance and burner in the existing EAF a 25% reduction in CO emissions was conservatively estimated based on manufacturer's information. Therefore, the emission factor used to calculate future potential CO emissions from the EAF in Minor Source Modification No. 071-12222-00016, issued on August 31, 2000 to determine PSD applicability, was changed from 8.5 pounds of CO per ton of metal product to 6.37 pounds of CO per ton of metal product. This emission factor is included as a CO emission limit in this Part 70 permit.

Pursuant to 326 IAC 2-2-3(2), BACT, as determined in CP-071-2546-00110, issued on December 10, 1993, the following shall apply to the drying rotary kiln (DRK):

(a) Process emissions from the DRK shall be exhausted through the 95% efficient wet scrubber exhausting from stack S-2;
(b) Fugitive emissions from the DRK shall be contained within the building;
(c) Visible emissions from any building opening as a result of the DRK shall be limited to 6% opacity in any one (1) six (6) minute averaging period.
(d) Particulate matter from the drying process shall not exceed 0.3 pounds per hour;
(e) Pursuant to 326 IAC 2-2 and 6-5, the dryer air pollution control equipment operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.

Pursuant to 326 IAC 2-2-3(2) BACT, as determined in CP-071-2546-00110, issued on December 10, 1993, the boiler (B1) shall burn only natural gas and shall be limited to 12.55 MMBtu per hour heat input. Combustion gases shall be vented to the atmosphere through stack S-3.

Pursuant to 326 IAC 2-2-3(2) BACT, as determined in CP-071-2546-00110, issued on December 10, 1993, the following shall apply to the Metal Powder Classifying facility and the Pulverizing, Feather Mills, Classifying, Blending and Packaging facility:

(a) Emissions of PM and PM10 from conveying, product sieving and sizing, storage, and blending shall be controlled by a baghouse dust collection system (BS-1) with a minimum overall control efficiency of 99%.
(b) Emissions of PM and PM10 from the product surge hoppers shall be controlled by two (2) baghouse dust collection systems (BS-2a and BS-2b) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-2a and BS-2b, respectively.
(c) Emissions of PM and PM10 from all packaging systems shall be controlled by four (4) baghouse dust collection systems (BS-3a, BS-3b, BS-3c, and BS-3d) with a minimum overall control efficiency of 99% and vented to building roof ventilators BS-3a, BS-3b, BS-3c, and BS-3d, respectively.
(d) Fugitive emissions emitted from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.
(e) Particulate matter emissions from the Metal Powder Classifying facility shall not exceed 0.03 pound per hour.
(f) Particulate matter emissions from the product surge hoppers shall not exceed 0.02 pound per hour.
(g) Particulate matter emissions from all packaging systems shall not exceed 0.02 pound per hour.

An April 25, 2002 inspection of this source revealed that the baghouse dust collection system for control of PM and PM10 emissions from the conveying, product sieving and sizing, storage, and blending, identified as BS-1, was not installed as required in the permit. However, a recent

inspection was performed at the source and the inspector has confirmed that the required baghouse has been installed.

The above limits for RF-1 and RF-2 and the limits taken from the operation conditions in the existing PSD permit (CP-071-2546-00110) will satisfy the requirements of 326 IAC 2-2 (PSD) for this source.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM-10 and CO. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2 (1), (2), or (3).

**State Rule Applicability - Individual Facilities**

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit, constructed after the rule applicability date of July 27, 1997, which has the potential to emit (PTE) 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs, must be controlled using technologies consistent with the Maximum Achievable Control Technology (MACT). The only units at the source constructed after July 27, 1997 are the premix line and the laboratory scale pilot blender. Emissions of any single HAP (toluene is the only HAP) from the premix line and laboratory scale pilot blender are limited to less than 10 tons per year, therefore, these units are not subject to the requirements of this rule.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The 12.55 MMBtu per hour boiler (B1) for the drying rotary kiln is subject to the requirements of 326 IAC 6-2-4 since it is an indirect heating facility that was constructed after September 21, 1983. Pursuant to this rule, PM emissions from the boiler shall be limited to 0.565 pound per MMBtu heat input. This emission limit was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where: Pt = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input
Q = Total source maximum operating capacity rating in MMBtu/hr heat input.
= 12.55 MMBtu/hr

Potential PM emissions from the boiler (B1) are 0.10 ton per year, therefore, this facility is in compliance with 326 IAC 6-2-4.

326 IAC 6-3-2 ( Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(c)(1) and (5), as revised in the revisions to 326 IAC 6-3 that were adopted on February 6, 2002, and became effective on June 12, 2002, 326 IAC 6-3-2 does not apply if a particulate matter limitation established in 326 IAC 2-2-3, concerning PSD BACT determinations contained in a permit, or 326 IAC 12, concerning new source performance standards, is more stringent than the particulate limitation established in 326 IAC 6-3-2.

Since the applicable PM limits for the EAF established by 326 IAC 2-2 (PSD) of 0.004 gr/dscf (and 2.3 pounds per hour) and by 326 IAC 12, 40 CFR 60.270a, Subpart AAa, are more stringent than the particulate limit that would be established by 326 IAC 6-3-2 (19.2 pounds per hour), the more stringent limits apply and the limit pursuant to 326 IAC 6-3-2 does not apply.

Since the applicable PM limits for the DRK established by 326 IAC 2-2 (PSD) of 0.3 pound per hour is more stringent than the particulate limit that would be established by 326 IAC 6-3-2 (15.4 pounds per hour), the more stringent limit applies and the limit pursuant to 326 IAC 6-3-2 does not apply.

Since the applicable PM limits for the conveying, product sieving and sizing, storage, and blending, the product surge hoppers and the packaging systems established pursuant to 326 IAC 2-2 (PSD) of 0.03, 0.02, and 0.02, respectively, are more stringent than the particulate limits that would be established by 326 IAC 6-3-2 (19.2 pounds per hour each), the more stringent limits apply and the limits pursuant to 326 IAC 6-3-2 do not apply.

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from each of the two (2) reduction/annealing furnaces (RF-1 and RF-2) shall not exceed 13.6 and 12.1 pounds per hour, respectively, when operating at process weight rates of 12,000 and 10,000 pounds per hour, respectively.

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the Premix line shall not exceed 9.19 pounds per hour when operating at a process weight rate of 6,666 pounds per hour.

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the laboratory scale pilot blender shall not exceed 1.23 pounds per hour when operating at a process weight rate of 333.3 pounds per hour.

The above particulate emission limitations are based on the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The potential particulate emissions from RF-1 and RF-2 are each 0.15 ton per year, therefore, these units are in compliance with these limits.

The potential particulate emissions from the Premix line and the laboratory scale pilot blender are each less than 0.1 ton per year, therefore, these units are in compliance with this rule.

326 IAC 8-3-2 (Cold Cleaner Operations)

The cold cleaner degreaser at this source, constructed after January 1, 1980, which is an insignificant activity and is used for maintenance purposes only, is subject to 326 IAC 8-3-2. Pursuant to this rule, the owner or operator shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a matter that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control)

The cold cleaner degreaser at this source, constructed after July 1, 1990, which is an insignificant activity and is used for maintenance purposes only, is subject to 326 IAC 8-3-5. Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{O}$C) (one hundred degrees Fahrenheit (100$^{O}$F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{O}$C) (one hundred degrees Fahrenheit (100$^{O}$F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38$^{O}$C) (one hundred degrees Fahrenheit (100$^{O}$F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9$^{O}$C) (one hundred twenty

degrees Fahrenheit (120$^{O}$F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

Pursuant to 326 IAC 8-3-5(b), the Permittee shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

326 IAC 9-1-2 (Carbon Monoxide Emission Rules)

The electric arc furnace (EAF) is not subject to the requirements of 326 IAC 9-1-2. This rule only limits CO emissions from petroleum refining operations, ferrous metal smelters, and refuse incineration and burning equipment. Kobelco does not perform any of these operations. The EAF at this source is not a ferrous metal smelter. Iron ore or direct iron ore derivatives are not added to the EAF. Only steel scrap is added to the EAF where it is melted, not smelted. The inspector for this source has also verified that the EAF at this source does not perform smelting, and it is not considered a ferrous metal smelter. Since the EAF does not meet the definition of a ferrous metal smelter, this rule does not apply.

**Testing Requirements**

PM and PM10 testing is required for the EAF to demonstrate compliance with the emission limits pursuant to 40 CFR 60.270a, Subpart AAa and 326 IAC 2-2 (PSD).

Testing is not required for the DRK because pursuant to 326 IAC 2-2 and 6-5, the dryer air pollution control equipment operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained in the permit.

Testing is not required for the boiler, B1, because it does not meet any of the criteria requiring testing.

CO testing is required for both RF-1 and RF-2 to demonstrate compliance with the CO emission limits pursuant to 326 IAC 2-2 (PSD).

PM and PM10 testing is required on all seven (7) baghouse dust collectors (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d) used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems to demonstrate compliance with the emission limits pursuant to 326 IAC 2-2 (PSD) and to establish the compliance monitoring parameters that will be used to demonstrate compliance in the future.

Testing is not required for any other emission units at this source because they do not meet any of the criteria requiring testing.

**Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The electric arc furnace (EAF) has applicable compliance monitoring conditions as specified below:

   (a) Pursuant to 40 CFR 60.273a(c), observations of the opacity of the visible emissions from the electric arc furnace baghouse stack exhaust (Stack S-6) shall be performed by a certified visible emission observer as follows: Visible emission observations are conducted at least once per day when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in 40 CFR 60.272a(a).

   (b) Pursuant to 40 CFR 60.274a(b), except as provided under 40 CFR 60.274a(d), the Permittee is required to check and record the furnace static pressure if a direct-shell evacuation control (DEC) system is in use and either (1) check and record the control system fan motor amperes and damper position on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. Since a DEC system is not used with the EAF at this source, it is not necessary for the Permittee to check and record the furnace static pressure. However, the source has indicated that of the remaining monitoring requirements listed as (1) or (2) above, it will comply with option (2).

The EAF is enclosed by a doghouse type enclosure with a minimum capture efficiency of 98%. The source will install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through the doghouse enclosure (which performs the function of a hood). The monitoring device(s) may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of ±10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. IDEM, OAQ may require the Permittee to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of Appendix A of 40 CFR Part 60.

(c) Pursuant to 40 CFR 60.274a(c), when the Permittee is required to demonstrate compliance with the standard under 40 CFR 60.272a(a)(3) and at any other time that IDEM, OAQ may require, that either the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b)(1) or (b)(2) of 40 CFR 40.274. The Permittee may petition IDEM, OAQ for reestablishment of these parameters whenever the Permittee can demonstrate to IDEM, OAQ's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. Operation at other than baseline values may be subject to the requirements of 40 CFR 60.276a(c).

(d) Pursuant to 40 CFR 60.274a(d), the Permittee shall perform monthly operational status inspections of the equipment that is important to the performances of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall included observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

(e) Pursuant to 40 CFR 60.274a(e), the Permittee may petition IDEM, OAQ to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system.

(f) Pursuant to 40 CFR 60.274a(h), during any performance test required under 40 CFR 60.8, and for any report thereof required by 40 CFR 60.275a(d), or to determine compliance with 40 CFR 60.272a(a)(3), the Permittee shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;
(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside the doghouse enclosure;
(3) Control device operation log; and
(4) Continuous monitor or Reference Method 9 data.

(g) Pursuant to 40 CFR 60.276a(a), records of the measurements required in 40 CFR 60.274a must be retained for at least 2 years following the date of the measurement.

(h) Pursuant to 40 CFR 60.276a(b), the Permittee shall submit a written report of exceedances of the control device opacity to IDEM, OAQ semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(i) Either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the IDEM, OAQ to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to IDEM, OAQ semiannually.

(j) Pursuant to 40 CFR 60.276a(f), the Permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish IDEM, OAQ a written report of the results of the test.

(k) The Permittee shall record the total static pressure drop across the baghouse controlling the electric arc furnace, at least once per shift when the electric arc furnace is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan **-** Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

These monitoring conditions are necessary because the electric arc furnace must be in compliance with 40 CFR 60.270a through 276a, Subpart AAa, and because the baghouse and doghouse enclosure for the furnace must operate properly to ensure compliance with 40 CFR 60.270a through 276a, Subpart AAa, 326 IAC 2-2 (PSD), and 326 IAC 2-7 (Part 70).

2. The drying rotary kiln (DRK) has applicable compliance monitoring conditions as specified below:

(a) Visible emissions notations of the drying rotary kiln (DRK) stack exhaust shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall record the total static pressure drop and flow rate of the scrubber used in conjunction with the drying rotary kiln (DRK), at least once per shift when the DRK is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the scrubber is outside the normal range of 17.0 and 23.0 inches of water or a range established during the latest stack test, or the flow rate of the scrubber is below a minimum of 30 gallons per minute, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range or a flow rate that is below the above mentioned flow rate is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) An inspection shall be performed each calender quarter of the scrubber controlling the drying rotary kiln (DRK).

(d) In the event that scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

These monitoring conditions are necessary because the wet scrubber for the drying rotary kiln (DRK) must operate properly to ensure compliance with 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70).

3. The Metal Powder Classifying facility and the Pulverizing, Feather Mills, Classifying, Blending and Packaging facility have applicable compliance monitoring conditions as specified below:

(a) Visible emission notations of the exhaust points of the seven (7) baghouse dust collection systems (BS-1, BS-2a, BS-2b, BS-3a, BS-3b, BS-3c, and BS-3d) used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall record the total static pressure drop across each of the baghouse dust collectors used in conjunction with the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems, at least once per shift when the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse dust collector is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C-Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) An inspection shall be performed each calendar quarter of all bags controlling the conveying, product sieving and sizing, storage, and blending, product surge hoppers, and all packaging systems when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

(d) In the event that bag failure has been observed:

(1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(2) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouse dust collectors for the Metal Powder Classifying facility and the Pulverizing, Feather Mills, Classifying, Blending and Packaging facility must operate properly to ensure compliance with 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70).

**Conclusion**

The operation of this metal powder manufacturing operation shall be subject to the conditions of the attached proposed Part 70 Permit No. T071-7315-00016.

# Appendix A: Emission Calculations Summary

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operation Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

**Uncontrolled Potential Emissions (tons/year)**

| | Emissions Generating Activity | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pollutant | Electric Arc Furnace | Rotary Kiln Dryer | Boiler for Kiln Dryer | Reduction/Annealing Furnaces | Oxy-fuel and Coherent Jet Burners | Metal Powder Classifying Facility (1) | Product Surge Hoppers (2) | Packaging Systems (2) | Premix Line and Pilot Blender | Insignificant Activities | **TOTAL** |
| PM | 10.07 | 13.25 | 0.10 | 0.30 | 0.16 | 120.14 | 93.86 | 93.86 | negl. | 3.17 | 334.91 |
| PM10 | 7.66 | 13.25 | 0.41 | 1.18 | 0.62 | 120.14 | 93.86 | 93.86 | negl. | 1.60 | 332.58 |
| SO2 | 2.19 | 0.00 | 0.03 | 0.10 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 2.39 |
| NOx | 4.38 | 0.00 | 5.51 | 19.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.41 | 33.23 |
| VOC | 5.69 | 0.00 | 0.30 | 0.86 | 0.45 | 0.00 | 0.00 | 0.00 | 9.64 | 0.27 | 17.21 |
| CO | 279.01 | 0.00 | 4.53 | 48.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.87 | 334.59 |
| total HAPs | 0.04 | 0.00 | 0.00 | 0.29 | 0.02 | 0.00 | 0.00 | 0.00 | 9.64 | 0.00 | 9.99 |
| worst case single HAP | Lead 0.04 | 0.00 | 0.00 | Hexane 0.28 | Hexane 0.02 | 0.00 | 0.00 | 0.00 | Toluene 9.64 | 0.00 | Toluene 9.64 |

Total emissions based on rated capacity at 8,760 hours/year.
(1) Metal Powder Classifying Facility emissions based on dust collector maximum outlet grain loading of 0.01 gr/acfm, an exhaust flow rate of 3,200 acfm.
(2) Product surge hoppers and packaging emissions based on dust collector maximum outlet grain loading of 0.01 gr/acfm, an exhaust flow rate of 2,500 acfm for each dust collector.

**Controlled Potential Emissions (tons/year)**

| | Emissions Generating Activity | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pollutant | Electric Arc Furnace | Rotary Kiln Dryer | Boiler for Kiln Dryer | Reduction/Annealing Furnaces | Oxy-fuel and Coherent Jet Burners | Metal Powder Classifying Facility | Product Surge Hoppers | Packaging Systems | Premix Line and Pilot Blender | Insignificant Activities | **TOTAL** |
| PM | 0.01 | 0.66 | 0.10 | 0.30 | 0.16 | 1.20 | 0.94 | 0.94 | negl. | 3.17 | 7.48 |
| PM10 | 0.01 | 0.66 | 0.41 | 1.18 | 0.62 | 1.20 | 0.94 | 0.94 | negl. | 1.60 | 7.55 |
| SO2 | 2.19 | 0.00 | 0.03 | 0.10 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 2.39 |
| NOx | 4.38 | 0.00 | 5.51 | 19.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.41 | 33.23 |
| VOC | 5.69 | 0.00 | 0.30 | 0.86 | 0.45 | 0.00 | 0.00 | 0.00 | 9.64 | 0.27 | 17.21 |
| CO | 279.01 | 0.00 | 4.53 | 48.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.87 | 334.59 |
| total HAPs | 0.00 | 0.00 | 0.00 | 0.29 | 0.02 | 0.00 | 0.00 | 0.00 | 9.64 | 0.00 | 9.95 |
| worst case single HAP | 0.00 | 0.00 | 0.00 | Hexane 0.28 | Hexane 0.02 | 0.00 | 0.00 | 0.00 | Toluene 9.64 | 0.00 | Toluene 9.64 |

Total emissions based on rated capacity at 8,760 hours/year, after control.

## Appendix A: Emission Calculations Summary
## Insignificant Activities

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operation Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

**Potential Emissions (tons/year)**

| | Emissions Generating Activity | | | | |
|---|---|---|---|---|---|
| Pollutant | Ladle to Tundish Teeming (1) | Slag Pot and Ladle Slag Dump (2) | Ladle and Tundish Preheat Units (3) | Flame Suppression Atomizer (3) | **TOTAL** |
| PM | 3.07 | 4.7E-02 | 0.05 | 0.01 | 3.17 |
| PM10 | 1.31 | 2.2E-02 | 0.21 | 0.05 | 1.60 |
| SO2 | 0.00 | 0.00 | 0.02 | 0.00 | 0.02 |
| NOx | 0.00 | 0.00 | 2.79 | 0.62 | 3.41 |
| VOC | 0.09 | 0.00 | 0.15 | 0.03 | 0.27 |
| CO | 0.00 | 0.00 | 2.35 | 0.52 | 2.87 |
| total HAPs | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| worst case single HAP | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Total emissions based on rated capacity at 8,760 hours/year.

(1) Ladle to tundish teeming emissions based on emission factors from US EPA's FIRE, v. 6.23, SCC 3-03-009-21 and maximum metal throughput of 10 tons/hr.
(2) Slag pot and ladle slag dump emissions based on US EPA's AP-42, Section 13.2.4, Equation 1 for material handling using a mean wind speed of 1 mph and a material moisure content of 0.1%.
(3) See Appendix A, page 8 of 9 for ladle and tundish preheat units and flame suppression atomizer detailed emission calculations.

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operating Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

Electric Arc Furnace (EAF)

| TYPE OF MATERIAL | Throughput LBS/HR | Throughput TON/HR | Control Device: / Control Efficiency: |
|---|---|---|---|
| Liquid Steel | 20000 | 10 | Baghouse S-6 / 99.9% |

| | PM<br>lbs/ton metal product | PM10<br>lbs/ton metal product | SOx<br>lbs/ton metal product | NOx<br>lbs/ton metal product | VOC<br>lbs/ton metal product | CO<br>lbs/ton metal product | Lead<br>lbs/ton metal product | Manganese<br>lbs/ton metal product |
|---|---|---|---|---|---|---|---|---|
| | N/A | N/A | 0.05 | 0.10 | 0.13 | 6.37 | N/A | N/A |
| Potential Uncontrolled Emissions lbs/hr | 2.30 | 1.75 | 0.5 | 1.0 | 1.3 | 63.7 | 2.3E-04 | 9.2E-03 |
| Potential Uncontrolled Emissions lbs/day | 55.2 | 42.0 | 12.0 | 24.0 | 31.2 | 1528.8 | 5.5E-03 | 2.2E-01 |
| **Potential Uncontrolled Emissions tons/year** | **10.07** | **7.66** | **2.19** | **4.38** | **5.69** | **279.01** | **1.0E-03** | **4.0E-02** |

Notes:
PM emissions based on maximum allowable PM limit of 2.3 lbs/hr from PSD permit CP-071-2546-00110, issued December 10, 1993. PM10 emissions based on PM10 to PM ratio of 0.76 lbs PM10/lb PM from USEPA's AP-42, section 12.5, Table 12.5-2.
NOx emission factor from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (AIRS), September 1989.
SO2 and VOC emissions factors based on stack test data.
CO emission factor based on maximum allowable CO emission limit of 8.5 lb CO per ton metal product from PSD permit CP-071-2546-00110, issued on December 10, 1993. Based on manufacturer's data, CO emissions from the EAF will be reduced by at least 25% due to installation of oxy-fuel burner and Coherent Jet on the EAF. Therefore, the new emission limit for CO from the EAF will by (8.5 * 0.75) = 6.37 lbs CO/ton metal product.
Lead and Manganese emissions based on weight percents of each constituent in the EAF dust. Weight percents were obtained from EAF dust analyses results. Emissions are calculated by multiplying the weight percent of the constituent in the dust by the PM emissions.

Rotary Drying Kiln

| TYPE OF MATERIAL | Throughput LBS/HR | Throughput TON/HR | Control Device: / Control Efficiency: |
|---|---|---|---|
| Wet-powdered Steel | 20000 | 15 | Scrubber S-2 / 95.00% |

| Grain Loading per Actual Cubic Foot of Outlet Air | Air Flow Rate (acfm) | Control Efficiency | Total Uncontrolled PM/PM10 (lbs/hr) | Total Uncontrolled PM/PM10 (tons/yr) | Total Controlled PM/PM10 (lbs/hr) | Total Controlled PM/PM10 (tons/yr) |
|---|---|---|---|---|---|---|
| 0.10000 | 3530.00 | 95.00% | **3.03** | **13.25** | **0.15** | **0.66** |

Note: Grain loading based on scrubber manufacturer's data.

**Appendix A: Emissions Calculations**

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operating Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

Reduction/Annealing Furnace #1

| TYPE OF MATERIAL | Throughput LBS/HR | Throughput TON/HR | Control Device: | N/A |
|---|---|---|---|---|
| | | | Control Efficiency: | N/A |
| Semi-Finished Steel Powder | 12000 | 6.0 | | |

| | **PM** **lbs/ton metal charged** | **PM10** **lbs/ton metal charged** | **SOx** **lbs/ton metal charged** | **NOx** **lbs/ton metal charged** | **VOC** **lbs/ton metal charged** | **CO** **lbs/ton metal charged** | **Lead** **lbs/ton metal charged** | |
|---|---|---|---|---|---|---|---|---|
| | N/A | N/A | N/A | N/A | N/A | 1.00 | N/A | |
| Potential Uncontrolled Emissions lbs/hr | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 0.0 | |
| Potential Uncontrolled Emissions lbs/day | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 144.0 | 0.0 | |
| **Potential Uncontrolled Emissions tons/year** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **26.28** | **0.0** | |

Notes:
See Appendix A, page 6 of 9, for PM, PM10, NOx, and SOx emission calculations.
The CO emission factor is based on stack tests performed on the furnace on June 30, 1998, and represents emissions from natural gas combustion and decarburization of the steel powder.

Reduction/Annealing Furnace #2

| TYPE OF MATERIAL | Throughput LBS/HR | Throughput TON/HR | Control Device: | N/A |
|---|---|---|---|---|
| | | | Control Efficiency: | N/A |
| Semi-Finished Steel Powder | 10000 | 5.0 | | |

| | **PM** **lbs/ton metal charged** | **PM10** **lbs/ton metal charged** | **SOx** **lbs/ton metal charged** | **NOx** **lbs/ton metal charged** | **VOC** **lbs/ton metal charged** | **CO** **lbs/ton metal charged** | **Lead** **lbs/ton metal charged** | |
|---|---|---|---|---|---|---|---|---|
| | N/A | N/A | N/A | N/A | N/A | 1.00 | N/A | |
| Potential Uncontrolled Emissions lbs/hr | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 0.0 | |
| Potential Uncontrolled Emissions lbs/day | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 120.0 | 0.0 | |
| **Potential Uncontrolled Emissions tons/year** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **21.90** | **0.0** | |

Notes:
See Appendix A, page 7 of 9, for PM, PM10, NOx, and SOx emission calculations.
The CO emission factor is based on stack tests performed on the furnace on June 30, 1998, and represents emissions from natural gas combustion and decarburization of the steel powder.

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR < 100**

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operating Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 12.55 | 107.8 |

Heat Input Capacity includes:
one (1) 12.55 MMBtu per hour boiler which supplies steam to the Rotary Kiln.

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 102.2 | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.10 | 0.41 | 0.03 | 5.51 | 0.30 | 4.53 |

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
NOx Emission Factor from boiler manufacturer specifications.
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 e
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR < 100**

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operating Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 18.00 | 154.6 |

Heat Input Capacity includes:
one (1) Reduction/Annealing Furnace (RF-1), rated at 18.0 MMBtu per hour.

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 99.96 | 5.5 | N/A |
| Potential Emission in tons/yr | 0.15 | 0.59 | 0.05 | 7.73 | 0.43 | 0.00 |

Note:
See Appendix A, page 4 of 8, for CO emission calculations from RF-1.

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
NOx Emission Factor from burner manufacturer specifications.
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 e
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,022 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR <100**
**Small Industrial Boiler**

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operating Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 18.00 | 154.6 |

Heat Input Capacity includes:
one (1) Reduction/Annealing Furnace (RF-2), rated at 18.0 MMBtu per hour.

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 157.83 | 5.5 | N/A |
| Potential Emission in tons/yr | 0.15 | 0.59 | 0.05 | 12.20 | 0.43 | 0.00 |

Note:
See Appendix A, page 4 of 8, for CO emission calculations from RF-2.

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
NOx Emission Factor from burner manufacturer specifications
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 e
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR <100**
**Insignificant Activities**

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operating Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 4.69 | 55.9 |
| 1.45 | 12.5 |

Heat Input Capacity includes:
one (1) 2.33 MMBtu/hr ladle preheat unit, two (2) 1.18 MMBtu/hr tundish preheat units, and one (1) 1.45 MMBtu/hr flame supression atomizer.

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 100.0 | 5.5 | 84.0 |
| Preheat Units Potential Emission in tons/yr | 0.05 | 0.21 | 0.02 | 2.79 | 0.15 | 2.35 |
| Atomizer Potential Emission in tons/yr | 0.01 | 0.05 | 3.7E-03 | 0.62 | 0.03 | 0.52 |

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 e
Potential Throughput (MMCF) for Preheat Units is provided by Kobelco based on incresed metal production rate.
Potential Throughput (MMCF) for Atomizer = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR <100**
**Small Industrial Boiler**

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operating Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 19.00 | 163.2 |

Heat Input Capacity includes:
one (1) Oxy-Fuel burner, rated at 9.5 MMBtu/hr and one (1) Coherent Jet burner, rated at 9.5 MMBtu/hr.

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | N/A | 5.5 | N/A |
| Potential Emission in tons/yr | 0.16 | 0.62 | 0.05 | 0.00 | 0.45 | 0.00 |

NOx and CO emissions were not included because use of this equipment is expected to result in decreases of the emissions of these two pollutants from the EAF.

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations**
**Premix Line**

**Company Name:** Kobelco Metal Powder of America, Inc.
**Address City IN Zip:** 1625 Bateman Drive, Seymour, Indiana 47274
**Operation Permit No.:** T071-7315
**Plt ID:** 071-00016
**Reviewer:** Trish Earls
**Date:** February 10, 2003

| | | | | |
|---|---|---|---|---|
| * Total estimated annual solvent input rate: | 88,500 | gallons/yr = | 321.48 | tons/yr VOC/HAP |
| ** Loss Rate: | 3.00% | = | 311.83 | tons/yr VOC/HAP recovered |
| | | Solvent Density: | 7.265 | lbs/gallon |
| | | *** Limited VOC/Toluene Emission Rate: | 9.64 | tons/yr |

Notes:
100% toluene.
** Loss rate represents worst case expected and is the toluene input rate minus the toluene recovered.
Density (lb/gal) * 1 ton/2000
lbs]
Due to the intrinsic high density of the metal powder, particulate matter emissions from the premixing process are negligible (<0.1 tons/yr).